DOCUMENT RESUME

ED 097 479 CE 002 245

TITLE Nutrition and Food: Curriculum Guidelines.
INSTITUTION Arizona State Dept. of Education, Phoenix. Div. of Vocational Education.
PUB DATE [73]
NOTE 305p.

EDRS PRICE MF-$0.75 HC-$15.00 PLUS POSTAGE
DESCRIPTORS Career Opportunities; Consumer Education; *Curriculum Guides; Educational Objectives; Food; Food Handling Facilities; Food Processing Occupations; Food Service Occupations; *Foods Instruction; Individual Needs; Learning Activities; Nutrition; *Nutrition Instruction; *Resource Materials; Student Developed Materials; Student Evaluation; Teaching Techniques
IDENTIFIERS Food Preparation; Food Preparation (Commercial); Food Selection

ABSTRACT

The curriculum guide is designed to serve as a resource for local teachers and community members to design their own special curriculum around the unique nutritional needs of individuals and families making up the population. The guide is organized around six major topics: the individual's involvement in nutrition and food, factors involved in consumer food choices, in food selection, in food preparation, career opportunities in nutrition and food occupations, and commercial food preparation. Emphasis is given to using the discovery method of learning. Each major topic can be presented as a separate unit or as a basis for a course in that area. Each section contains a topical outline, bibliography, conceptual statements, student objectives (beginning, intermediate, and advanced levels), learning experiences, and evaluative experiences. Materials which may be duplicated for classroom use form a 42-page appendix to the document. The second part of the document (35 pages) contains materials developed by a graduate nutrition class for junior high and high school instruction dealing with food as it relates to the world, growth, life, and people. Performance objective, conceptual statement, and the learning experience are specified for each. Various methods of teaching nutrition are employed. (Author/AG)

CE 002245

ED 097479

U S DEPARTMENT OF HEALTH.
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

NUTRITION and FOOD

ARIZONA DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL EDUCATION
HOME ECONOMICS EDUCATION

NUTRITION AND FOOD

CURRICULUM GUIDELINES

Prepared
by
Home Economics Section
Division of Vocational Education
Arizona Department of Education
1535 West Jefferson
Phoenix, Arizona
85007

STATE BOARD OF EDUCATION
1973

President	Mr. O. B. Joy
Vice President	Mr. Stephen S. Jenkins, Jr.
Member	Mr. David Weisenborn
Member	Mr. Paul P. Kennedy
Member	Mr. Richard Harris
Member	Dr. Dwight G. Hudson
Member	Dr. J. Lawrence Walkup
Member	Mrs. Merle Platt
Member	Dr. W. P. Shofstall

ARIZONA DEPARTMENT OF EDUCATION
Division of Vocational Education
1535 West Jefferson, Phoenix, Arizona 85007

Dr. W. P. Shofstall	Executive Officer, State Board for Vocational Education and Superintendent of Public Instruction
Dr. James Hartgraves	Deputy Superintendent of Public Instruction
Mr. G. W. Harrell	Deputy Superintendent of Public Instruction
Mr. Eugene L. Dorr	Associate Superintendent for Career Education and Director of Vocational Education
Mr. William Anderson	Deputy Associate Superintendent for Vocational Education
Mrs. Shirley Mannion	Deputy Associate Superintendent for Vocational Education
Mr. Paul Bennewitz	Deputy Associate Superintendent for Career Education
Mrs. Clio S. Reinwald	Director, Home Economics Occupations
Mrs. Barbara Border	Specialist, Home Economics Occupations and State Adviser, Home Economics Related Occupations Club
Mrs. Lettie B. Cale	Specialist, Home Economics Occupations and State Adviser, Future Homemakers of America

STATE CURRICULUM COMMITTEE
for
NUTRITION AND FOOD
1972

Mrs. Sheila Faris Butler	Miami High School
Mrs. Audrey Cornell	Alhambra Elementary School, Phoenix
Miss Connie Howard	Professor, Home Economics Education, Pima College, Tucson
Mrs. Nancy Kores	Mingus Union High School, Cottonwood
Mrs. Alice Maurice	South Mountain High School, Phoenix
Mrs. Elaine Thompson	Tolleson Union High School
Mrs. Lettie B. Cale	Chairman, Specialist, Department of Education, Division of Vocational Education
Miss Virginia L. Felch	Consultant, Nutrition and Food, Department of Education, Division of Vocational Education

STATE CURRICULUM COMMITTEE
for
NUTRITION AND FOOD
1973

Mrs. Mae Baldridge	Northern Yuma County Union High School District, Parker
Mrs. Judy Beuchal	North High School, Phoenix
Mrs. Sheila Faris Butler	Miami High School
Mrs. Margaret Godwin	Blue Ridge High School, Lakeside
Mrs. Elaine Thompson	Tolleson Union High School
Mrs. Delores Watkins	Apache Junction High School
Mrs. Lettie B. Cale	Chairman, Specialist, Department of Education, Division of Vocational Education
Mrs. Barbara A. Border	Specialist, Department of Education, Division of Vocational Education
Miss Virginia L. Felch	Consultant, Nutrition and Food, Department of Education, Division of Vocational Education

TABLE OF CONTENTS

Foreword . . . vii
Introduction and Statement of Curriculum Philosophy . . . viii
Organization and Sequence . . . ix

Topical Outline

Page
1.0 Individual Involvement in Nutrition and Food . . . 2
  1.1 Influence of Personal Experiences and Concerns on Food Choices . . . 4
  1.2 Effect of Nutritional Status on Personal Accomplishments . . . 6
  1.3 Responsibility for Adequate Nutrition . . . 6
2.0 Factors Affecting Consumer Food Choices . . . 8
  2.1 Influences on Food Decisions . . . 12
    2.11 Family Characteristics . . . 14
    2.12 Values . . . 14
    2.13 Resources . . . 16
    2.14 Location . . . 16
  2.2 Planning for Food Purchasing . . . 16
    2.21 Reasons for Planning . . . 18
    2.22 Types of Stores . . . 18
    2.23 When to Shop . . . 18
    2.24 Methods of Payment . . . 20
    2.25 Shopping Procedures . . . 20
    2.26 Variety of Forms of Food . . . 22
  2.3 Influences on the Consumer . . . 22
    2.31 Advertising . . . 22
    2.32 Merchandising . . . 24
    2.33 Packaging and Labeling . . . 26
  2.4 Need for Nutritional Knowledge . . . 26
    2.41 Food Fads . . . 28
    2.42 Food Fallacies and Superstitions . . . 28
    2.43 Food Quackery . . . 28
    2.44 Sources of Reliable Information . . . 30
    2.45 Additives and Preservatives . . . 32
  2.5 Consumer Guidance and Protection . . . 32
    2.51 Consumer Responsibilities . . . 32
    2.52 Shopping Etiquette . . . 34
  2.6 Buying Guides for Selected Foods . . . 34
    2.61 Fruits and Vegetables . . . 34
    2.62 Meat, Fish, Poultry, and Eggs . . . 36
    2.63 Milk and Dairy Products . . . 38

Page
    2.64 Bread and Cereal Products . . . 38
    2.65 Fats and Oils . . . 38
    2.66 Convenience Foods . . . 40
3.0 Factors Affecting Food Selection . . . 42
  3.1 Guides for Food Selection . . . 48
  3.2 Nutrients Needed for Health and Growth . . . 48
    3.21 Nutrients . . . 50
      3.211 Proteins . . . 50
      3.212 Carbohydrates . . . 52
      3.213 Fats . . . 52
      3.214 Vitamins . . . 54
      3.215 Minerals . . . 56
      3.216 Water . . . 56
  3.3 Availability of Nutrients to Body Use . . . 56
    3.31 Breaking Down Food into Nutrients . . . 58
    3.32 Basal Metabolic Rate . . . 58
    3.33 Weight Control . . . 60
  3.4 Evaluation of Nutritional Status . . . 60
    3.41 Factors which Influence Nutritional Status . . . 62
    3.42 Methods Used to Measure Nutritional Status . . . 62
  3.5 Individual Variations for Nutrients and Calorie Needs . . . 64
    3.51 Pregnancy and Lactation . . . 64
    3.52 Childhood . . . 66
    3.53 Teenagers . . . 68
    3.54 Adults . . . 70
  3.6 Nutrition as Related to Abnormal Conditions . . . 72
    3.61 Research Correlating Nutrition to Disease . . . 72
    3.62 Infection . . . 72
    3.63 Dental Health . . . 72
    3.64 Alcoholism . . . 74
    3.65 Drug Use and/or Addiction . . . 74
  3.7 Environmental Influences on Nutritional Health . . . 76
    3.71 Socio-Psychological Influences . . . 76
      3.711 Expression of Human Emotions . . . 76
      3.712 Communication . . . 76

Page

- 3.713 Socializing Influence . . . 76
- 3.714 Food Preferences . . . 78
- 3.715 Sensory Enjoyment . . . 78
- 3.72 Cultural Influence . . . 80
  - 3.721 Ethnic Background . . . 82
  - 3.722 Religious Heritage . . . 82
  - 3.723 Holiday Foods . . . 82
  - 3.724 Effect of Mobility . . . 84
- 3.73 Effect of Malnutrition . . . 84
  - 3.731 Interrelated Factors in Malnutrition . . . 86
  - 3.732 Malnutrition in the World . . . 88
  - 3.733 Hunger and Malnutrition in the United States . 88
- 3.74 Food in the Future . . . 90

4.0 Exploration and Identification of Professional and Supportive Careers Related to Nutrition and Food . . . 92
- 4.1 Current Trends in the Occupation . . . 96
  - 4.11 Changing Roles of People . . . 96
  - 4.12 Changing Attitudes Toward Work . . . 98
  - 4.13 Technological Changes . . . 98
  - 4.14 Changes in Life Styles . . . 98
  - 4.15 Rate of Growth . . . 100
- 4.2 Physical, Mental and Psychological Characteristics Involved in Careers in Food and Nutrition . . . 100
- 4.3 Educational and/or Training Requirements for Occupations in Food and Nutrition . . . 102
- 4.4 Exploration and Identification of Careers in Foods and Nutrition . . . 102

5.0 Factors Involved in Food Preparation . . . 104
- 5.1 Orientation to Working in the Kitchen . . . 112
  - 5.11 Cooperation with Others . . . 112
  - 5.12 Personal Grooming . . . 114
  - 5.13 Sanitary Practices . . . 114
  - 5.14 Safety Practices . . . 116
    - 5.141 Types of Hazards . . . 116
    - 5.142 First Aid for Emergencies . . . 118
- 5.2 Small Kitchen Equipment . . . 118
  - 5.21 Identification and Selection . . . 120
    - 5.211 Small Appliances . . . 120
    - 5.212 Hand Tools . . . 120
  - 5.22 Use and Care of Small Equipment . . . 120
  - 5.23 Substitution of Equipment . . . 122
- 5.3 Kitchen Organization and Management . . . 122
  - 5.31 Work Centers . . . 122
    - 5.311 Task Simplification . . . 124
    - 5.312 Organization of Work Centers . . . 124
    - 5.313 Kitchen Floor Plans . . . 126
  - 5.32 Storage . . . 126
    - 5.321 Equipment . . . 128
    - 5.322 Supplies . . . 128
  - 5.33 Stationary Equipment . . . 130
    - 5.331 Use and Care . . . 130
    - 5.332 Selection . . . 130
- 5.4 Using Recipes . . . 132
  - 5.41 Cooking Terms . . . 132
  - 5.42 Measuring Ingredients . . . 134
  - 5.43 Equivalents and Substitutions . . . 134
  - 5.44 Altering Recipes . . . 134
- 5.5 Customs for Eating . . . 136
  - 5.51 Table Appointments and Setting . . . 136
  - 5.52 Style of Serving . . . 138
  - 5.53 Mealtime Manners . . . 138
- 5.6 Principles and Procedures for Preparing Food and Food Products . . . 138
  - 5.61 Fruits and Vegetables . . . 140
    - 5.611 Raw . . . 140
    - 5.612 Fruit Cookery . . . 142
    - 5.613 Vegetable Cookery . . . 142
  - 5.62 Breads and Cereals . . . 144
    - 5.621 Cereals and Pastas . . . 146
    - 5.622 Baked Flour Mixtures . . . 148
  - 5.63 Milk and Milk Rich Foods . . . 152
  - 5.64 Meat and Meat Products, Extenders and Substitutes . 152
    - 5.641 Principles of Meat Cookery . . . 154
    - 5.642 Meat Extenders and Substitutes . . . 154
    - 5.643 Eggs . . . 156
  - 5.65 Other Foods . . . 156
    - 5.651 Sugar Cookery . . . 158
    - 5.652 Fats and Oils . . . 160
    - 5.653 Seasonings . . . 160
- 5.7 Meal Planning . . . 162
  - 5.71 Food Patterns . . . 162
    - 5.711 Three Meals . . . 164
    - 5.712 Multiple Meal . . . 164
    - 5.713 Snacks . . . 166
  - 5.72 Sensory Appeal . . . 166
  - 5.73 Eating Away from Home . . . 168

Page
5.74 Modifying Foods for Individual and Family Needs . . 168
  5.741 Age Groups 170
  5.742 Health Problems 170
  5.743 Multi-role Families 172
  5.744 Emergency Situations 172
5.75 Leftovers 174
5.76 Meal Planning Tools 174
5.8 Preparing and Serving Meals and Snacks 174
  5.81 Efficient Use of Resources 176
    5.811 Time Saving Techniques 176
    5.812 Convenience Foods 178
  5.82 Meals for Special Occasions 178
    5.821 Holidays 178
    5.822 Parties 180
    5.823 Camping, Cookouts, Picnics 180
  5.83 International and Regional Foods 182
5.9 Food Preservation 182
  5.91 Freezing 184
  5.92 Canning 186
  5.93 Chemicals 186
  5.94 Other Preservation Methods 188
6.0 Commercial Food Preparation 194
  6.1 Food Terminology 194
  6.2 Equipment 195
    6.21 Types and Sizes 195
    6.22 Placement 196
    6.23 Care 196
    6.24 Safety 196
  6.3 Hygiene and Sanitation 197
    6.31 Bacteria Growth 197
    6.32 Food Supply 197
    6.33 Equipment 198
    6.34 Food Preparation 198
    6.35 Products 199
    6.36 Work Areas 199
      6.361 Handling of Glassware, Cutlery, Pots and Pans 199
      6.362 Dishwashing Process 199
    6.37 Garbage Control 200
    6.38 Personal Hygiene 200
  6.4 Planning 200
    6.41 Type of Function 201
      6.411 Self-Served and Semi Self-Served 201
      6.412 Served 201
      6.413 China or Disposable Service 202
    6.42 Menu Planning 202
      6.421 Development of Menu 202
      6.422 Physical Conditions of Preparation 204
      6.423 External Influences 205
  6.5 Importance of Recipes 205
    6.51 Standardized Recipes 205
    6.52 Reading and Interpreting Recipes 206
    6.53 Measurements 206
    6.54 Food Portioning 207
  6.6 Methods and Types of Preparation 207
    6.61 Selection of Methods of Cooking 208
      6.611 Moist Heat 208
      6.612 Dry Heat 208
    6.62 Preparation of Appetizers, Beverages, and Soups . . 209
    6.63 Salad, Salad Dressings, Vegetables 210
    6.64 Breads, Batters, Cereals 211
    6.65 Desserts 211
    6.66 Main Dishes 212
    6.67 Seasonings 213
  6.7 Merchandising 213
    6.71 Food Appeal 213
    6.72 Garnishes 213
    6.73 Displaying of Food 214
  6.8 Service 214
    6.81 Table Service 215
    6.82 Counter 215
    6.83 Cafeteria 216
    6.84 Carry-Out 216
    6.85 Station Up-Keep 216
Appendix Materials . . . . . A-1 to A-34
Local Resources for Nutrition Education Materials A-35
Partial Listing of Sources Offering Educational Materials A-36
Publications on Current Nutrition Information A-38
Nutrition Terms A-39
Recommended Daily Allowances A-43

FOREWORD

As the White House Conference on Food, Nutrition, and Health was opened, the President of the United States told the conferees, "The plain fact is that a great many Americans are not eating well enough to sustain health." The statement is appallingly true in Arizona as well as elsewhere and does not represent only the poor. It includes people in every economic strata and every level in the family life cycle from birth to death.

This curriculum guide is designed to serve as a resource for local teachers and community members to design their own special curriculum around the unique nutritional needs of individuals and the families which make up that population. Emphasis is given to using the discovery method through class discussions, in food science laboratories, in the market place and in viewing, reading, and interpreting nutrition materials whether seen on the screen, magazines, billboards, radio, sales demonstrations and many others. The writers of this publication had in mind some broad goals as student outcomes of its use by educators to design, teach and implement the consuming of food for good nutrition. These goals are:

Develop an awareness of good nutrition and how to practice it;

Discover ways of using money and other resources wisely in providing, preparing and eating food;

Recognize that no one culture has all the answers to being well-fed;

Develop competence in appraising promotional information;

Become informed to:

Question,
Reason,
Criticize,
Analyze, and
Apply – –
the basic concepts of nutrition to everyday living.

A word of appreciation goes to each staff member, members of the Steering Committee, teachers and others who have contributed to making this publication a reality. It is hoped a more intelligent, healthy, and well-fed citizenry in Arizona will result from its implementation and use.

Eugene L. Dorr

Eugene L. Dorr
Associate Superintendent for Career Education
and Director of Vocational Education

INTRODUCTION

Food is essential to life. The foods an individual selects and one's pattern of eating affects his physical, mental, and social well-being. Food is vital not only for the physiological processes of the body, but plays a part in social and cultural customs as well.

In our pluralist society, the choices of food available are ever multiplying, making wise selection in terms of nutrition, palatability, cost and preparation more difficult. The need for education in nutrition and food becomes constantly more imperative.

This resource guide is organized around six major topics: the individual's involvement in nutrition and food, factors involved in consumer food choices, in food selection, in food preparation, career opportunities in nutrition and food occupations, and commercial food preparation.

Emphasis is placed on the influence of the individual and society on food choices and the effect of these choices on individual attainments. Today, the vast majority of food is purchased rather than home grown so particular attention is given to consumer food choices. The factors influencing consumer food choices such as family characteristics, values, and resources are considered. Advertising, merchandizing, food fads and fallacies affect consumer food choices.

What foods are needed for adequate nutrition? How do nutrient needs vary with age and under various health conditions? The section on factors affecting food selection explores these questions. Environmental influences play a prominent role in food selection and eating patterns through their relationship to cultural and sociopsychological factors.

A myriad of jobs and careers using knowledge and skills related to nutrition and foods are available. Exploration of the qualifications and education needed and examination of the duties and responsibilities involved is found in the fourth section. Food preparation skills and principles for use in the home and commercially are presented in the two final sections of the guide.

It is hoped that through participation in the learning experiences such as provided in this curriculum guide, the student will accept greater responsibility for his nutritional behavior and gain insights into the physical, economic, social and cultural influences that affect his food choices.

ORGANIZATION AND SEQUENCE

The curriculum guide is organized so that each major topic can serve as a separate unit or a basis for a course in that area. For each section there are the following components:

Topical Outline – A listing of the concepts or main ideas in that section.

Bibliography – References and other resources which will be helpful in teaching these concepts.

Conceptual Statements – Sentences which describe a concept of a process or the structure of an objective, or idea. These may be statements of principles or generalizations.

Student Objectives – The objectives are written in three domains: cognitive, affective and psycho-motor. In each objective, the behavior expected from the student has been identified, but the teacher will need to indicate level of achievement. Objectives in the cognitive domain are developed at progressing levels of complexity for beginning, intermediate and advanced levels.

Learning Experiences – Activities designed to help students gain understanding of the conceptual statement have been suggested for the Beginning, Intermediate, and Advanced levels. **Beginning** level is defined as the level at which the student is first exposed to the topic whether in elementary, junior high, senior high or adult level. Experiences requiring more complex, in-depth thinking are developed for the **Intermediate** level. **Advanced** level experiences build on the two previous levels. Generally, they will appeal to more mature students and serve as a capstone for learnings relative to the conceptual statement.

Evaluative Experiences – A star (*) identifies the evaluative aspect of each Learning Experience.

Appendix – Materials which may be duplicated for classroom use are found at the end of the guide. These are referenced to the Learning Experiences with the same numbers as found in the Topical Outline.

Each school district will need to adapt the Nutrition and Food Curriculum Guide to meet the needs of its students and community. The curriculum planner will need to select the topics from each section that are most appropriate for the students. As the topics are selected for each unit or course, the needs, interests and previous experiences of the students should be considered as well as the time available. The topics should not be taught in isolation but integrated. For example, when the students are learning to prepare fruits and vegetables, the nutrients contained and purchasing of these items should be presented.

Following are examples of topical outlines for courses at two levels:

7th Grade – "The World of Foods" (6 weeks)

- 1.0 Individual Involvement in Nutrition and Food
  - 1.1 Influence of Personal Experiences and Concerns on Food Choices
  - 2.1 Influences on Food Decisions
  - 2.3 Influences on the Consumer
    - 2.31 Advertising
    - 2.32 Merchandising
    - 2.52 Shopping Etiquette
- 3.0 Factors Affecting Food Selection
  - 3.1 Guides for Food Selection
    - 3.21–3.216 Nutrients
      - 3.713 Socializing Influence
      - 3.715 Sensory Enjoyment
- 5.0 Factors Involved in Food Preparation
  - 5.1– 5.142 Orientation to Working in the Kitchen
  - 5.2– 5.22 Small Kitchen Equipment
  - 5.4– 5.42 Using Recipes
  - 5.5– 5.53 Customs for Eating
      - 5.611 Preparing Raw Fruits and Vegetables
      - 5.621 Preparing Cereals
      - 5.622 Baked Flour Mixtures (Cookies, thick batters)
    - 5.63 Preparing Milk
      - 5.713 Snacks
      - 5.822 Parties

9th and/or 10th Grade – "Contemporary Foods" (Semester Course)

- 1.0– 1.3 Individual Involvement in Nutrition and Food
- 2.0 Factors Affecting Consumer Food Choices
  - 2.1– 2.14 Influences on Food Decisions
  - 2.2– 2.25 Planning for Food Purchasing
  - 2.3– 2.33 Influences on the Consumer
  - 2.4– 2.45 Need for Nutritional Information
  - 2.5– 2.52 Consumer Guidance and Protection
  - 2.6– 2.66 Buying Guides for Selected Foods
- 3.0 Factors Affecting Food Selection
  - 3.2– 3.216 Nutrients Needed for Health and Growth (Review)
    - 3.33 Weight Control
  - 3.5 Individual Variations for Nutrients and Calorie Needs
  - 3.7 Environmental Influences
    - 3.71–3.715 Sociopsychological Influences
    - 3.72–3.724 Effect of Mobility
      - 3.733 Hunger and Malnutrition in the United States
- 4.0 Exploration and Identification of Professional and Supportive Careers Related to Nutrition and Food
  - 4.2 Physical, Mental, and Psychological Characteristics Involved in Nutrition and Foods
  - 4.3 Education and/or Training Requirements for Occupations in Nutrition and Foods
  - 4.4 Exploration and Identification of Careers in Nutrition and Food
- 5.0 Factors Involved in Food Preparation (5.1, 5.2, 5.4, 5.5,–Review if needed.)
  - 5.3– 5.33 Kitchen Organization and Management
  - 5.6– 5.65 Principles and Procedures for Preparing Food and Food Products
  - 5.7– 5.744 Meal Planning
  - 5.8– 5.81 Preparing and Serving Meals
- 5.9– 5.94 Food Preservation

TOPICAL OUTLINE

- 1.0 Individual Involvement in Nutrition and Food
  - 1.1 Influence of Personal Experiences and Concerns
  - 1.2 Effect of Nutritional Status on Personal Accomplishments
  - 1.3 Responsibility for Adequate Nutrition

BIBLIOGRAPHY

Books

Cote, Patricia. *People, Food and Science*, Boston, Massachusetts: Ginn and Company, 1968.

Davis, Martha J. and Peeler, M. Yvonne. *Lessons in Living*, Boston, Massachusetts: Ginn and Company, 1970.

Leverton, Ruth M. *Food Becomes You*, Ames, Iowa: Iowa State University Press, 1965.

U. S. Department of Agriculture. *Food for Us All, Yearbook of Agriculture*, Washington, D.C.: U. S. Government Printing Office, 1969.

Booklets

U. S. Department of Agriculture, Consumer and Marketing Service. *You Can Help Fight Hunger in America: Food Stamp Handbook for Volunteers*, Washington, D.C.: Superintendent of Documents, U. S. Government Printing Office 20402.

Filmstrips

It Takes More Than Love, The National Foundation–March of Dimes, Supply Division, 800 Second Avenue, New York, New York 10017. $6.00. Color with 33 1/3 rpm record. (Available on loan Arizona Association, FHA, 1535 West Jefferson, Phoenix, AZ 85007.)

Why School Lunch, The American School Food Service Association, Denver, Colorado, Film Library ASFSA Headquarters Office, P.O. Box 8811. Color, with record, 20 minutes.

Periodicals

Anon. "The White House Conference on Food, Nutrition and Health," supplementary report from panel on popular education, *Journal of Nutrition Education*, Volume 1, No. 4, pp. 19–24, 1970.

Harker, C. S. and Kupsinel, P. E. "Nutrition Education for Today," *Journal of Home Economics*, Volume 63, pp. 15–18, 1971.

Anon. "Nutrition Education for Youth," *Journal of Home Economics*, Volume 64, pp. 34–38, 1972.

Topical Outline

1.0 Individual Involvement in Nutrition and Food
  1.1 Influence of Personal Experiences and Concerns on Food Choices

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
		Beginning Level
1.0 Recognition of the multitude of factors involved in the provision of an adequate diet may increase the individual's interest in food choices.	1.0 **All Levels** *Knowledge and Awareness:* Expresses his involvement in food and nutrition by identifying areas of interest and concern.	1.0 Students eat snacks of fruit slices, vegetable relishes, cheese, crackers, sandwich meat, and respond to questions such as: Why did you select the items you did? What are other foods you like? Besides hunger, what are some other reasons why people eat? What interests and concerns do you have about food? (Student comments are listed on chalkboard under headings such as: Health, Consumer Choices, Career Opportunities, Environment, Preparation, and Processing, Serving.) Each student lists ten topics relative to food in which he is interested. These are compiled and may serve as a basis for selection of concepts. Students may complete questionnaire on food habits. (See Advanced Level)
1.1 Food choices are influenced by the interaction of a complex of physical, economic, cultural, and social experiences and concerns.	1.1 **Beginning and Intermediate Levels** *Comprehension:* Explains how food choices are influenced by personal experiences and concerns. **Advanced Level** *Analysis:* Analyzes selected physical, economic, cultural, and/or social experiences or concerns influencing food choices.	1.1 Students use a tape recorder to record the responses of other students to questions such as: – What was the best liked food in your lunch today? Why? – What did you not eat or what did you like the least? – What would you like to have for lunch? Why? – What do you think is the greatest influence on your food choices? – Do you feel you are able to make many food choices? Why or why not? – Have you ever changed your opinion about a food? What caused you to change? – Are there any new foods you have tried lately? What influenced you to try it?

LEARNING EXPERIENCES

Intermediate Level

1.0 Teacher hands each student an item of food or a food model. Teacher states, "Think of this item of food as a person you know–it could even be yourself. Describe what this person is like such as his interests, concerns, and needs in relation to food."

As the students describe the person, concerns related to food are listed on the chalkboard and grouped into categories such as: health, consumer choices, environment, careers, preparation, serving, etc.

Students identify interests and concerns that appear most often. (This may serve as a basis for selection of concepts to be presented.)

1.1 Students discuss the influence various factors on food decisions and nutritional behavior using questions as:

- What influences the foods you choose–taste, health needs, need for energy?
- Does society's expectations in terms of weight, figure, complexion affect your food choices?
- Does religion have any affect? How?
- What influences the way you eat (manners)?
- Do other people of your age have any influence on what you eat? In what way?
- Are there any foods you eat which are traditional in your family? What are they?
- Does the part of the country and whether you live in a rural or urban area have any affect? How?

* Students will cite several examples of influences on their food choices such as friends, locale, family, health problem, weight control.

Advanced Level

1.0 Students view a bulletin board showing individuals involved in many aspects and concerns related to nutrition and foods as purchasing and preparing foods, weight control, infant feeding, poor health, malnutrition, etc. Students rank the illustrations from greatest to least interest and concern. Students state reasons for their opinions.

Students identify other concerns relative to food and nutrition not shown on bulletin board.

Students then select topics of greatest interest and concern to them.

Students complete a questionnaire on their food habits such as illustrated in *Lessons in Living*, Teacher's Guide, pp. 3–5 or see Appendix, A-1. Results of the questionnaires are tabulated and presented to the class. Students interpret information from the questionnaires in relation to eating habits of the class.

1.1 Students make up a list of 20 food items ranging from those they like to those disliked, and give the reason why they like or dislike each item. Students analyze reasons given for influence of family preference, familiarity; taste, color, texture; a special food; effect of holiday, tradition, or religion; peer influence; social status or prestige of the food; past experience with food item. Students make a composite list, ranking foods from generally liked to generally disliked.

* Students analyze their personal food lists for the factors that may be influencing their food choices. Students alter one factor and analyze how that would affect their choices.

Topical Outline
1.0 Individual Involvement in Nutrition and Food
  1.2 Effect of Nutritional Status on Personal Accomplishments
  1.3 Responsibility for Adequate Nutrition

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
1.2 Physical, mental, and social attainments are enhanced or detered by nutritional status.	1.2 **Beginning and Intermediate Levels** *Comprehension:* Describes influence of nutritional status on one's physical, intellectual and social accomplishments. **Advanced Level** *Evaluation:* Compares ways that nutritional status influences an individual's physical, intellectual and social accomplishments.	**Beginning Level** 1.2 Students view a bulletin board showing an athlete, a young person studying, and youth at a party or social gathering. Students discuss, "Does the food a person eats have anything to do with the success he or she experiences in these areas? In what way?" * Students collect or sketch pictures of people illustrating how nutritional status can affect attainments physically, mentally, or socially.
1.3 When the responsibility for adequate nutrition is accepted by the individual, family, and the community, a contribution to health and well-being is made.	1.3 **Beginning Level** *Comprehension:* Describes the responsibilities individuals, families, and communities have for adequate nutrition. **Intermediate Level** *Comprehension:* Discusses current legislation relative to nutrition and food and implications for adequate nutrition. **Advanced Level** *Comprehension:* Describes various agencies and their functions which are concerned with nutrition and food.	1.3 Through use of a check list the student identifies when and what degree he/she accepts responsibility for his/her own adequate nutrition. Students consider others who are involved in providing adequate nutrition for them–parents, school, government agencies, industry. * Students prepare a bulletin board illustrating the responsibilities of the individual, the family, community, industry in providing adequate nutrition. Example: Individual–selects foods wisely; family–provides a balanced diet; school–has education in nutrition information.

LEARNING EXPERIENCES

	Intermediate Level		Advanced Level
1.2	Students respond, orally or in writing, to questions as: What are the characteristics of well-liked youth? Can one's diet (what one eats) affect this? If so, in what way? Can one's nutritional status affect his life goals? How? What do you think is the desirable physical condition for you? How do your concerns in this area affect your food choices? Are there any foods which you feel might help you attain what you wish? Students, orally or in writing, summarize what they would tell a younger sibling about the effect food has on his/her accomplishments, students keep summaries to check for accuracy at end of foods and nutrition unit.	1.2	Students outline a body type that they predict will be theirs 10 years, 25 years, and 50 years from now. Students tell what effect their diet will have on this body type and what dietary adjustments they may have to make.
1.3	Students share information from magazine and newspaper clippings relative to legislation concerning food and nutrition. Students gather information and debate a current topic relative to food legislation such as, "Should iron enrichment of all breads and cereals be required?" If there is a school lunch program, invite the director or manager to tell about the nutritional requirements for school lunches. Students take a tour of the kitchen facilities and watch food being prepared. Students discuss whether program should be offered in their school. Students debate: Should full lunches be provided for all children?	1.3	Students cite a number of nutritional problems which people in their community may have such as: obesity, not enough money to purchase adequate food, students not eating breakfast, low intake of calcium and vitamin C. Students discuss the role of the individual, family, and community in combating these problems. Students review types of food assistance programs available in their community for residents who are eligible for the programs. Students develop a project from the ideas presented. (This may be an FHA activity.) (Example: Take people without transportation to pick up food stamps or grocery shopping, help incapacitated people apply for stamps, conduct educational programs about food stamps.) Reference: *You Can Help Fight Hunger in America: Food Stamp Handbook for Volunteers.* Students write to various governmental agencies involved with food for information on their services and report findings to class. (or) Students hear representatives of various agencies discuss food and nutrition problems in the area and how the agencies can be of assistance.

TOPICAL OUTLINE

2.0 Factors Affecting Consumer Food Choices
- 2.1 Influences on Food Decisions
  - 2.11 Family Characteristics
  - 2.12 Values
  - 2.13 Resources
  - 2.14 Location
- 2.2 Planning for Food Purchasing
  - 2.21 Reasons for Planning
  - 2.22 Types of Stores
  - 2.23 When to Shop
  - 2.24 Methods of Payment
  - 2.25 Shopping Procedures
- 2.3 Influences on the Consumer
  - 2.31 Advertising
  - 2.32 Merchandising
  - 2.33 Packaging and Labeling
- 2.4 Need for Nutritional Knowledge
  - 2.41 Food Fads
  - 2.42 Food Fallacies and Superstitions
  - 2.43 Food Quackery
  - – "Organic" Foods
  - – "Health" Foods
  - 2.44 Sources of Reliable Information
  - 2.45 Additives and Preservatives
- 2.5 Consumer Guidance and Protection
  - 2.51 Consumer Responsibilities
  - 2.52 Shopping Etiquette
- 2.6 Buying Guides for Selected Foods
  - 2.61 Fruits and Vegetables
  - 2.62 Meat, Fish, Poultry, and Eggs
  - 2.63 Milk and Dairy Products
  - 2.64 Cereal and Cereal Products
  - 2.65 Fats and Oils
  - 2.66 Convenience Foods

BIBLIOGRAPHY

Books

Barclay, M. S., Champion, F., Brinkley, J. H., Funderburk, K. W. *Teen Guide to Homemaking*, 3rd ed. New York: McGraw-Hill Book Company, 1972.

Carson, Byrta and Ramee, MaRue Carson. *How You Plan and Prepare Meals*, 2nd ed. St. Louis: Webster Division, McGraw-Hill Book Company, 1968.

Cote, Patricia. *People, Food and Science*. Boston: Ginn and Company, 1968.

Deutsch, Ronald M. *Nuts Among the Berries*. New York: Ballantine Book, 1967. (paperback)

Heseltine, Marjorie and Dow, Ula M. *The Basic Cookbook*, 5th ed. rev. Boston: Houghton Mifflin Company, 1967.

Oerke, Bess V. *Mealtime*, Peoria: Charles A. Bennett Company, Inc., 1960.

Sellers, Warmtke, Wyllie. *Consumer Guide for Buying*. South-Western Publishing Company, 5101 Madison Road, Cincinnati, Ohio 45227, 1972.

Stare, Frederick J. *Eating for Good Health*, rev. ed. Cornerstone, 1969. (paperback)

United States Department of Agriculture. *Consumers All*, The Yearbook of Agriculture, Washington, D.C., 1965.
Food For Us All, The Yearbook of Agriculture, Washington, D.C., 1969.
Protesting Our Food, The Yearbook of Agriculture, Washington, D.C., 1966.

Pamphlets

A Source Book on Food Practices, National Dairy Council, 1968.

"Apples to Zucchini," *Home Economics Learning Packages* American Home Economics.

Biesdorf, Heinz B. and Burris, Mary Ellen. *Be a Better Shopper: Buying in Supermarkets*, Ithaca: Cornell University, 14850. Bulletin 86 1970.

Eggs: Basic Information for Young Homemakers, Poultry and Egg National Board. Chicago: 8 South Michigan Avenue, 60603.

"Food and Fitness – A Report by Blue Cross." *Blue Cross*, 850 North Lake Shore Drive, Chicago 60611, 1973.

Food Stamp Program: More Food, Better Diets for Low Income Families, (PA-930). United States Department of Agriculture, Food and Nutrition Service. Washington, D.C.: U.S. Government Printing Office.

How to Buy Food, U.S. Department of Agriculture's Consumer and Marketing Service, Washington, D.C.: U.S. Government Printing Office.

Marketing Eggs, Farmer's Bulletin, No. 1378, U.S.D.A., Washington, D.C.: U.S. Government Printing Office, 1958.

"Money Management Your Food Dollars," Money Management Institute of Household Finance, Corp., Prudential Plaza, Chicago, 60601.

Montgomery, Charlotte. *Food Advertising and How It Helps You Feed Your Family*, General Foods, Corp., 250 North Street, White Plains, New York 10602, 1970.

Sellers, Beulah E., Warmke, Roman F., and Wyllie, Eugene D. *Consumer Guides for Buying*, Cincinnati: South-Western Publishing Company, 5101 Madison Road, 45227.

Vegetables in Family Meals: A Guide for Consumers, U.S.D.A. Home Garden Bulletin No. 105, 1971.

Your Guide to Good Eating and How to Use It, National Dairy Council.

Your Money's Worth in Foods, Home and Garden Bulletin No. 183, Washington, D.C.: Office of Information, U.S.D.A., 20250.

Periodicals

Boyd, Jacque. "Food Labeling and the Marketing of Nutrition," *Journal of Home Economics*, Vol. 65, No. 5, May 1973, pp. 20–24.

Calloway, Dr. Doris. "Are Health Foods Worth It?" *McCalls*, Vol. 99, No. 1, October 1971, p. 30.

Chase, Chris. "And Now a Few Words from Our Sponsor," *Good Housekeeping*, Vol. 177, No. 8, August, 1973, pp. 90–91.

"Counternutritional Messages of TV Ads Aimed at Children," *Journal of Nutrition Education*, Vol. 4, No. 2, Spring 1972, pp. 48–52.

"The Better Way," *Good Housekeeping*, March 1972, pp. 175–179.

Garagher, Kay. "Credit Game," *Illinois Teacher*, Urbana University of Illinois, Vol. XV, No. 1, 1971, p. 11.

Other Materials

Consumer Education and Management Resource Guide, Arizona Department of Education, Division of Vocational Education, Home Economics Education.

Home Economics Course of Study For Alabama High Schools. Vol. III, Montgomery: State Department of Education, 1968.

Home Economics Instructional Materials, Phoenix Union High School System, 1970–71.

Bibliography Nutrition Books, Compiled by the Arizona Dietetics Association, P.O. Box 21365, Phoenix, AZ 85036 (50¢)

Newsletter, Arizona Consumers Council, 3416 North 24th Lane, Phoenix, AZ 85015, (Membership: $5.00 per year).

Films

Behind the Scenes at the Supermarket, 11 minutes, color, 1958, rental $4.00, Film Association, BFA Educational Media.

Buying Food, 12 minutes, black and white, 1950, rental $4.50, Young America Films.

Consumer Protection, 11 minutes, black and white, 1948, rental $3.00, Coronet Instructional Films.

Credit: Label Logic, 18 minutes, color, rental $5.75, Aims Instructional Media Services, Inc., P.O. Box 1010, Hollywood, CA 90028.

Selecting and Preparing Beef, 21 minutes, color, 1969, free, Modern Talking Pictures, 1145 North McCadden Place, Los Angeles, CA 90038.

Food – A Way of Life, 27 minutes, black and white, 1960, rental $5.75, University of California, Berkeley.

Nutritional Quackery, 20 minutes, $240.00 or may be rented, Aims Instructional Media Services, Inc., P.O. Box 1010, Hollywood, CA 90028.

Selection of Fruits & Vegetables, 15 minutes, color, 1951, rental $5.75, Central Washington College of Education, Universal Education and Visual Arts.

Central Arizona Film Cooperative 1971–73 Educational Films, 1971, Audiovisual Center, Arizona State University.

Filmstrips

The In Way to Meal Making, color, 1969, Campbell Soup Company, Home Economics Education Service, P.O. Box 808, Maple Plain, MN 55359.

Your Food – Chance or Choice? F 604, color, sound, 106 frames, Dairy Council of Arizona, 2618 South 21st Street, Phoenix, AZ 85034; 717 North Swan Road, Tucson, AZ 85711.

Topical Outline
2.0 Factors Affecting Consumer Food Choices
2.1 Influences on Food Decisions

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
2.0 Intelligent food purchasing depends upon an understanding of the nutrients essential for health, knowledge and application of recommended purchasing practices, and information and skill in choice-making. (Cross Reference: *Consumer Education and Management Curriculum Guide*, pages 7–35)	2.0 **Beginning Level** *Comprehension*: Illustrates making consumer food decisions based on nutrition and consumer education principles. **Intermediate Level** *Application*: Applies principles of nutrition and consumer education to food purchasing choices by making economical, nutritious choices when purchasing food. **Advanced Level** *Analysis*: Criticizes consumer food choices in relation to utilization of principles of nutrition and consumer education. **All Levels** *Responding*: Practices sound principles of consumer food choices in a role playing situation.	2.0 Students examine bulletin board of food advertisements titled "What choices would you make?" and respond to the question: – In order to make wise choices, what kinds of information does a food shopper need? . about food costs . about marketing procedures . about food needs and likes . about advertising
2.1 The amount of money required for food is influenced by individual and family characteristics; values; resources of time, energy, and income; and the area in which one lives.	2.1 **Beginning and Intermediate Levels** *Comprehension*: Explains the factors influencing the amount of money needed for food. **Advanced Level** *Analysis*: Analyzes factors creating differences in the amount of money spent for food.	2.1 Teacher presents information about two students making a decision about where to eat and what to have for lunch. Students brainstorm for as many factors as possible that would influence their choices.

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
2.0 Sequence of experiences for 2.1-2.14 are suggested to achieve this objective.	2.0 Sequence of experiences for 2.1-2.14 is suggested to achieve this objective.
2.1 Students view pictures of two families which are very different from each other. Students hear description of family characteristics and respond to question, "Will the amount of money required for food be the same for both families? Why or Why not? What are some things you perceive in the picture that would affect the amount spent?"	2.1 Students will identify and discuss some of the decisions the homemaker makes before the final decision to take a product from the shelf and put it in her basket, such as: – What effect will this purchase have on the money budgeted for food? – Will the family like it? – Can I prepare it considering time, energy, and skill? – What else will have to be bought to go with it? – What will it contribute to the day's nutritional needs? – Will it be used immediately or later? – Will there be storage space for it? etc.

Topical Outline

2.0 Factors Affecting Consumer Food Choices
  2.11 Family Characteristics
  2.12 Values

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
2.11 The number of family members, age, sex, activity, occupations, food preferences, special dietary needs, and cultural background influence kinds and amounts of food purchased.	2.11 **Intermediate and Advanced Levels** *Application*: Collects information about family characteristics and applies it to the kinds and amounts of food purchased.	2.11 Learning Experiences are not appropriate at this level for this conceptual statement.
2.12 The importance the individual or family places on food in relation to other expenditures will affect the amount of money spent for food.	2.12 **Beginning and Intermediate Levels** *Comprehension*: Illustrates the relationship of an individual's values to the amount of money spent on food. **Advanced Level** *Analysis*: Analyze the effect of the value placed on food in relation to portion of income spent on it.	2.12 (The teacher develops a list of "auction" items which reflect certain values. See page 238. *Supplemental Teaching Materials for Consumer Education and Management*.) Students utilize list to assess their values and indicate the value they place on food.

LEARNING EXPERIENCES

Intermediate Level

2.11 Students are divided into different "families." Each family receives the same amount of money to purchase food for one week. Using newspaper ads, the "families" shop for food. All groups use the same ads and plan menus for 1 week. Each family justifies its purchases, menus, and food choices.

* Students discuss the effect of family size, ages, sex, balanced meals, occupations, and quantity purchasing or money available for food.

2.12 Using the same "family" groups as in 2.11 above, each "family" member lists the major things they want in the next 10 years or more, in the next 2-5 years, and the next few weeks. The "family" compiles an overall list and comes to agreement on 4-5 items in each area. The "family" shares its list with the class, and indicates what the major values of the "family" seem to be.

Students discuss the relation of food to these values and how they would affect the amount of money each family would spend on food.

Advanced Level

2.11 Students are given two case situations as:

1. Husband has desk job, wife is pregnant and full time homemaker. Their income is low; food preferences are T-Bone steaks and other expensive meats; and physical activity is limited.
2. Husband is construction worker and wife is secretary. Their income is moderate, physical activity is high, and food preferences are moderately priced food in large quantities. Additional examples may be developed.

* Students develop a week's menus and collect information on the amount, kinds, and cost of food in each case. Students use information to determine reasons for differences in cost.

2.12 (The teacher invites couples with differing life styles as both working; or one employed, one full-time homemaker; or one employed, one student; or retired; or differing social and recreational interests.) The couples describe when, why, where and how often they eat away from home. They also describe how important food is to them and estimate the amount spent for food per month.

Students will analyze the apparent importance of food to each couple and its relation to the amount of money spent for food.

* Each student writes a description of a family they know, including when and where they eat, amount of money spent and kinds of food eaten.

Students exchange papers and analyze the importance of food to each family and the effect it has on the proportion of family income spent for food.

Topical Outline

2.0 Factors Affecting Consumer Food Choices
    2.13 Resources
    2.14 Location
2.2 Planning for Food Purchasing

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
2.13 Resources available in terms of time, energy, skill in food preparation and preservation, storage space, transportation and income affect amount of money spent for food.	2.13 **Beginning and Intermediate Levels** *Comprehension*: Explain the effect available resources have on food purchases. **Advanced Level** *Synthesis*: Develops situations showing the effect available resources have on the amount of money spent on food.	2.13 If a snack bar or vending machines are available in the school, appoint a committee to determine the total range of foods available. Provide lists of the foods to the class. Students answer questions as: – What food groups are represented? – Are any groups missing or in low amounts? – What group(s) are in greatest amount? – How does the cost compare with other sources of like foods? – Has the snack bar or vending machines affected your food choices, how?
2.14 The area in which one lives affects the accessibility of food and the price of food.	2.14 **Beginning and Intermediate Levels** *Comprehension*: Discuss the differences in food costs in various areas. **Advanced Level** *Evaluation*: Compare food costs in various communities, and reasons for differences.	2.14 Students share information on their family's experiences with cost of food when living in various communities. Students suggest what might be the reasons for these differences as: isolation, distance from large wholesale centers, competition of stores.
2.2 Providing food for the family involves adequate planning and coordinating resources to meet family demands.	2.2 **All Levels** *Application*: Demonstrate adequate planning and coordination of resources in purchasing food.	2.2 Sequence of experiences for 2.21-3.–are suggested to achieve this objective.

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
2.13 Students observe a skit or role play of Mary, a young homemaker, "Thinking out loud" about the resources she has or is lacking that affect her food purchasing. For example, she might look at the clock and comment that she has 3 hours to get dinner, complain that she has to walk to the store, wish that she had a bigger freezing compartment, but notes that there is plenty of cupboard space in the kitchen, etc. Students list all the resources available and lacking that Mary mentions. Students discuss how these resources would affect what foods Mary purchases.	2.13 Given the following statement: "The higher a family's income is, the smaller the proportion of money spent for food, while the lower a family's income, the greater is the proportion of money spent for food," the students will illustrate its validity in concrete/creative ways such as: collage, charts, drawings, stories, or case histories. Students are given situations in which a certain resource is missing or in limited supply as: time, skill in food preparation, transportation. Students make suggestions for compensating for the lack of the particular resource as: time – convenience or quick cooking foods. * Students role play two homemakers shopping for food. One has a freezer, one does not. What are the differences in type and quantity of foods purchased, how often they shop, ability to take advantage of sale items.
2.14 The students make a list of foods which may be less expensive in their part of the country than in other places. Students discuss why this is true. They also note foods which may be more expensive and why.	2.14 The students will compare the cost of food in various Arizona communities using information from the Arizona Consumers Council. Students note if there are certain items which are expensive in one area and not another. Student concludes differences in cost.
2.2 Students use food buying quiz (Appendix, page A–2) as a pre-test and use as a basis for follow-up classroom discussion.	2.2 Students view portion of color slides, "Be a Better Shopper: Buying in Supermarkets," Cornell University Cooperative Extension Service, as applies to each topic.

Topical Outline

2.0 Factors Affecting Consumer Food Choices
    2.21 Reasons for Planning
    2.22 Types of Stores
    2.23 When to Shop

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
2.21 When plans are made in advance for food purchasing, decisions about spending for food will contribute to family well being. – provide for adequate nutrition – stay within family food allowance – make efficient use of time and energy – take advantage of economical purchasing	2.21 **Beginning and Intermediate Level** *Comprehension*: Evaluates decisions about spending for food in light of available information.	2.21 Through role play, students illustrate two consumers, one shopping with a list and one without. Students summarize advantages of using a list for shopping.
2.22 When selecting a store at which to shop, the location, quality and price of merchandise, special services, efficiency of paying, arrangements of merchandise, cleanliness, and parking are factors which will influence the decision made.	2.22 **All Levels** *Comprehension*: When given a description of stores, the student will summarize the factors influencing the choice of one store over the others.	2.22 Students compare prices of food items of same brand, amount and kind at 3 different stores such as supermarket, convenience market, independent grocer. Students indicate why the price may vary.
2.23 When shopping is done at a time when the store is least crowded, and shelves and counters well-stocked, shopping time will be reduced. By knowing the delivery time and dates of produce, a consumer can buy fresh produce at its optimum quality.	2.23 **All Levels** *Application*: Collect information about the best time to shop in stores in his area.	2.23 Students are presented a case study of a student whose mother is ill and she must do the grocery shopping. Since her time is limited, she must select a time when she can accomplish the grocery shopping quickly. Students visit a store at 3 different times and note when the shelves and counters are the best stocked, the produce the freshest and the fewest people shopping. Students choose when would be the best time to shop. Students interview 5 people to find out when they shop for food and why they chose that particular hour.

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
2.21 Students compare prices of a variety of food bought in quantity (2 quarts of fresh green beans for 39¢ or 1 gallon for 75¢) and in single units or servings (11 for 20¢ or 16 eight-ounce cans at $3.00). Students compute price and quantity differences and choose the best buy in each case, including nutritional needs.	2.21 Students develop a weekly shopping list from menus for an imaginary family. Students check "specials" in weekly ads and note which items are on shopping list. Students compare prices of similar items in several ads and note special sales. Students select on the basis of the ads, a store in which to shop.
2.22 The teacher will devise a check list for students to use in comparing various types of food stores such as supermarket, neighborhood grocer, discount store and quick market. Items on check list might include check-cashing policies, location, credit, carry-out, parking, cleanliness, selection, ease of check-out, arrangement of merchandise, over-all price, quality, and hours. Students collect and summarize information. Students identify the type of store which might be chosen in various situations.	2.22 (Independent project) Students will visit 2-3 stores in area and sketch floor plan showing location of major food items. Copies of the floor plan will be distributed to students to use when making shopping lists. Students will compare the amount of time it takes to shop when their shopping list is arranged according to the location of items and when it is not.
2.23 Students in small groups visit food stores at various times as: 5-6 p.m. on double stamp day; 5 p.m. on Friday; Saturday morning; Sunday afternoon; and noon any day. Students note the number of people shopping at each time. Students use information to choose a time when one could shop in the least amount of time at a particular store. Students compare the shopping habits of a busy working person with someone retired.	2.23 Given the same shopping list of food items, at least 3 groups of students shop at a store 3 different times of day; keeping track of the time involved from entering to leaving the store. Students conclude which time of day and day of week would facilitate ease of shopping and provide freshest produce.

Topical Outline
2.0 Factors Affecting Consumer Food Choices
2.24 Methods of Payment
2.25 Shopping Procedures

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	**Beginning Level**
2.24 The method of payment for food is influenced by income level, area in which family lives and preference in handling accounts. – cash – credit card – food stamps – charge accounts	2.24 **Beginning and Intermediate Levels** *Comprehension*: Summarize the characteristics of various methods of payment. **Advanced Level** *Application*: Calculate the actual cost of food using various methods of payment.	2.24 Students participate in discussion of the various methods of payment. * The students will role play consumers in a grocery store using various methods of payment such as: check, cash, credit, credit card, food stamps. * Students summarize the advantages and disadvantages of each type. * The students complete poem about "Careless Connie Consumer," *Teen Guide to Homemaking* page 231. (or) * As alternative to previous experience, students make up, individually or as a class, a poem about consumers using the following words: learned, concerned, care, bare, cash, rash few, do, seek, week, food, mood, saves, raves, deeds, needs, store, more.
2.25 When shopping procedures which allow for rational and discriminating choices are used, decisions about food contribute to individual and family well being. – A market list helps to save time, money, energy, and avoids impulse buying. – Comparison of size, quality, and brands, contributes to a more rational decision in food selection.	2.25 **Beginning Level** *Comprehension*: Describe selected recommended procedures to be used when shopping for food. **Intermediate and Advanced Level** *Application:* Demonstrate selected recommended procedures to be used when shopping for food.	2.25 The students will read references to obtain information about shopping procedures. Students rate "What is a Good Shopper?" (Reference: *Supplementary Teaching Materials for Consumer Education and Management*, June, 1972, "What is a Good Shopper?" page 235) Students discuss examples of impulse buying they have observed: – What were possible causes? – How could impulse buying have been avoided?

LEARNING EXPERIENCES

Intermediate Level

2.24 The students will play the "Credit Game." (See: "Credit Game" by Kay Garagher, *Illinois Teacher*, Sept-Oct, 1971, page 11-13.) The students will prepare a collage emphasizing a method of payment illustrating their own personal preferences, or an imaginary individuals preference of payment based upon the following facts:

- income level
- area in which family lives
- preference in method of payment

* The students will interpret each other's collages.

2.25 With the help of the teacher, arrange for a shopping experiment in a supermarket. Students prepare an extensive list of food products other than fresh fruits and vegetables or meats. They shop for those products using two shopping carts. In one cart place the products from the list that are store brands or for other reasons have low prices. In the other cart place comparable products that are nationally advertised brands or are sold at higher prices. Compare the results of the shopping.

- What is the difference in the total cost of the items in the two carts?
- What can you conclude with regard to price and brand?

Prepare written report of your experiment and your findings.
(or)
Use newspaper ads or teacher selected foods for the same experience.

Advanced Level

2.24 The students will take a pretest on making consumer decisions. (See: *Guide to Teen Homemaking*, page 214.)

The students will read, listen to, and participate in a discussion of the various methods of payment for consumer goods, and calculate the actual cost of $50.00 worth of foods paid by each of the following methods: check, interbank card, food stamps, store charge cards, and open account. Each method should be calculated to include interest charge on both 30 day and 60 day charge.

2.25 Students visit a large grocery store for the purpose of observing the shopping procedures and general behavior of the people who are buying groceries. Students take notes and spend enough time in the store to record information on the numerous techniques and ways by which people select a variety of products.

* Students apply information about shopping procedures by:

- Preparing a list of shopping procedures observed above.
- Preparing a statement of what seems to be the chief difference between a "wise" shopper and a "careless" shopper.

Topical Outline

2.0 Factors Affecting Consumer Food Choices
  2.26 Variety of Forms of Food
2.3 Influences on the Consumer
  2.31 Advertising

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
2.26 Food today can be purchased in a variety of forms: Fresh, canned, frozen, dehydrated, partially prepared, ready-to-serve, and as a packaged dry mix. The resources of a consumer will influence the food form chosen.	2.26 **Beginning Level** *Knowledge*: Identify forms in which foods can be purchased. **Intermediate and Advanced Levels** *Analysis*: Conclude that resources of the consumer will determine food form chosen.	2.26 List all the forms in which foods can be purchased; i.e., milk, potatoes, juices, meat, etc.
2.3 When the influences on the consumer are rationally evaluated, food choices which contribute to health and well-being are more likely to occur.	2.3 **Beginning Level** *Comprehension:* Describes influences that affect the consumer in the purchasing of food. **Intermediate and Advanced Level** *Analysis:* Determines some factors influencing personal motives in spending decisions for food.	2.3 Students describe the last item of food he purchased and tell: – when he bought it – why he bought it – whether he liked it – would he buy it again – what influenced his choice
2.31 When food advertising is carefully evaluated for correct and/or misleading information, a contribution to consumer buying can be made.	2.31 **Beginning Level** *Comprehension:* Illustrates food advertising which is informative and/or misleading. **Intermediate Level** *Application:* Prepares advertisements which are informative and accurate.	2.31 Students discuss which of the following items would be of real value to the consumer in an advertisement for a food product: – Endorsement by a famous person; – coupon to order another item such as stationery, plants, jewelry; – nutritional contents; – percentage of recommended daily allowance supplied; – net weight, price, ingredients; – coupon for "Cents Off" on next purchase.

LEARNING EXPERIENCES

	Intermediate Level	Advanced Level
2.26	Using a cost comparison chart and visiting a supermarket, students compare the cost of an item of food in its various forms. – Is there a price difference? – Is there a quality difference? – Is there an influence to buy over resources?	Students use menus for two families, one with full time homemaker and one with dual-role homemaker and career person and develop a grocery list indicating food and food form to be purchased. Students state the effect food form purchased will have upon families' resources.
2.3	(Teacher sets up a mock grocery display with cans and packages of several brands, sizes, and prices. Included in the display are some advertisements for foods, price reduction signs, samples of some foods.) Students are to select one or two items and give their reasons for selecting them. Students respond to questions as: – Did the advertisements influence you? – Why did you chose one size (package, price, brand) over another? – Did the location in the display influence you? – Did the samples influence you?	Student role plays a food purchaser being influenced by advertising, merchandising, packaging and labeling. Class analyzes what factors in the sales methods caused the person to select that product.
2.31	Students read leaflet "Food Advertising and How It Helps You Feed Your Family" by Charlotte Montgomery. Students will sketch one factual and one misleading advertisement for a given food item. Students will then check each other's advertisements for information and accuracy. (or) Students will collect advertisements for food items that appeal to them and display them on a bulletin board. Students will analyze each by underlining phrases or words that denote sales appeal or words and phrases which give no information. (or)	Students act out existing TV commercials advertising food items. Students evaluate each for factual information, sales appeal, and type of approach used. Students read newspaper articles relative to voluntary nutritional labeling for all food products. Students will discuss which type of nutritive information would be most useful to the consumer. (or) Students create and present a 30 second TV commercial. Class will evaluate as to whether it is factual or misleading. Presentations may be tape recorded. (or)

Topical Outline
2.0 Factors Affecting Consumer Food Choices
2.31 Advertising (Continued)
2.32 Merchandising

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
	Advanced Level *Evaluation:* Appraises the value and accuracy of various types of advertising in terms of usefulness to the consumer.	**Beginning Level** Students (or teacher) bring in many advertisements for food products. Students select several ads they consider "good" and several "poor" ads. Students review ads for – information provided – emotional appeals – general tastefulness – selling techniques – factual claims
2.32 Rational choices become more difficult for the consumer as the number of food products and ways of merchandising them increases.	2.32 **All Levels** *Application:* Uses information about merchandising methods to make logical and intelligent choices in purchasing food.	2.32 Students visit a nearby store and note where candy, gum, and snack items are located; also staple foods, and non-food items. Students consider: – Why are items at that location? – Where are new items or special items located and why? – Where are staple items that you have to buy located?

LEARNING EXPERIENCES

Intermediate Level

Students develop advertisements for a food product to be shown on an imaginary television station. The ads should be designed to appeal to a specific group of people as:

- small children
- mothers
- teenage girls
- teenage boys
- elderly people

2.32 Students will describe new products they have observed in the market in the past year. Students will ask parents and grandparents to describe the number and types of food items available 20 or 30 years ago.

Students hear a manager from a local supermarket describe ways he helps the consumer become aware of food products and reasons foods are displayed in particular ways.

Students ask questions relative to how the consumer can make use of merchandising information.

Advanced Level

Students read and discuss articles on "Counter nutritional messages of TV ads aimed at children," a reprint of testimony before the Subcommittee on the Consumer of the Senate Commerce Committee, March 2, 1972. (See *Journal of Nutrition Education* Vol. 4, No. 2, pages 48–52.)

Students write a paragraph in response to statement. "Food advertising should be eliminated from children's programs."

* Students write an evaluation of a given food advertisement from newspaper, magazine or TV commercial.

(or)

* The student will collect or draw cartoons illustrating consumer problems in making choices (probably about foods) as result of misinformation or incomplete information. Students supply needed information to make an intelligent choice.

2.32 Students list food items they most frequently purchase such as snack items, prepared foods, soft drinks, sandwich ingredients, chips, and ready to eat cereals. Students visit store to obtain information such as:

- Where was each item located?
- What is the reason for the location of each item?
- How does the store get you to purchase another item if out of an item you selected?
- How do you determine which size package you will buy when selecting an item?
- do stores have aids to help select the size containers?
- How do stores provide for advertized merchandise missing from the shelf?

Students share reports.

Topical Outline

2.0 Factors Affecting Consumer Food Choices
    2.33 Packaging and Labeling
2.4 Need for Nutritional Knowledge

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
2.33 When the size, type of packaging and information on the label is carefully considered a more rational decision relative to food choices may be made:	2.33 **Beginning Level** *Comprehension:* Summarizes the Federal requirements for labels on food. **Intermediate Level** *Application:* Apply knowledge of product labeling by constructing a product label including important consumer information. **Advanced Level** *Evaluation:* Given several packages of the same item, but different brands, selects the item which has the most informative label.	2.33 Students view film, "Label Logic" and check labels of several items using information from film. Students collect labels and wrappers from packages and canned goods. They review the labels and summarize types of information included. They arrange a bulletin board showing the most helpful labels. (See Appendix, A-3.) * Given an incomplete label, the student will fill in the missing information. (See Appendix, A-4.) * Students will list the Federal requirements for labels on food.
2.4 Nutritional knowledge helps individuals interpret and evaluate information on food and nutrition so that they may select food beneficial for health and economy.	2.4 **Beginning and Intermediate Level** *Comprehension:* Explain the need for nutritional knowledge in assessing information about food and nutrition. **Advanced Level** *Application:* Able to use reliable sources of nutritional information to evaluate sensational claims relative to food and nutrition. **All Levels** *Valuing:* Refers to reliable information sources in assessing food and nutrition claims.	2.4 Students listen as teacher reads the introduction to *The Nuts Among the Berries*, pages 7–11, about eminent, intelligent, and capable people who have been "taken in" by food fads and food quackery. Students express their ideas about why people believe false claims about the nutritive value of food.

LEARNING EXPERIENCES

	Intermediate Level		Advanced Level
2.33	Students will discuss the information found on a label and divide information into: – that required by law – that not required by law	2.33	Given four packages of the same food item, but of different brands, the students will compare the labels and select the most and the least informative ones. Students investigate the labeling plans for voluntary nutritional labeling being proposed by the Food and Drug Administration. Students debate the type of labeling which would be most useful to the consumer. (See *Journal of Home Economics*, May, 1973, pages 20–24.)
*	Students will create a label for a product of their choice and trade their ideas with another student for comments and suggestions. Students will present their labels before the class for discussion.	*	Students design a new type of packaging for a new or well-known product for consumer use, including all necessary information on the package or label and other helpful information.
2.4	Teacher prepares a bulletin board, "Would You Believe . . ." showing advertisements or statements which made extravagant claims for nutritive values in food or food supplements. Students respond to questions as: – What are some examples of false claims for the nutritive value of foods? – What are some of the problems that result when people believe that false claims about food are true?	2.4	Students role play a situation of a person being persuaded to follow a food faddist's claims. Students list the questions about adequate nutrition the person should have asked the food faddist. Students give their opinions as to what should be done with people who promote food faddism, considering their rights under the First Admendment. Students develop a list of ways to avoid being taken in by food faddists.

Topical Outline

2.0 Factors Affecting Consumer Food Choices
  2.41 Food Fads
  2.42 Food Fallacies and Superstitions
  2.43 Food Quackery

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
2.41 Food faddisms, involves the promotion of the belief in certain foods, groups of foods, and nutrients out of proportion to their nutritive value, which might be useful, harmless, or harmful.	2.41 **Beginning Level** *Comprehension:* Describes what a food fad is and what the effect of a food fad might be. **Intermediate and Advanced Level** *Analysis:* Analyzes food fad products and books, checking sources of authority.	2.41 Students discuss what is meant by a fad and formulate a definition. Students tell about some current fads relative to food. Students discuss: – Why do people believe in and follow food fads? – Are food fads helpful or harmful to health? – In discussing reasons for following food fads, students might cite reasons as: . personal goals, i.e., weight gain or loss . group pressure–family, peers, culture . economic considerations . one's past experience and misconceptions . ignorance of effect . fear of harmful effects
2.42 An incorrect assumption with regard to food is called a food fallacy or superstition.	2.42 **All Levels** *Comprehension:* Explains what food fallacies are and why they lack substantiation. (See Appendix, A-5.)	2.42 Students compile a list of sayings about food as, "Fish is a brain food." Students use references and report to the class as to the validity of each. * Given a list of food fallacies, students rate each as to helpful, useless, possibly harmful, and harmful.
2.43 Food quackery builds on food fads and usually involves promotion through advertising, high-pressure sales techniques, pseudo-scientific information, and extravagant promises of the value of certain food products or supplements. Food faddism and quackery can be dangerous to health, lead to economic problems or undermine public confidence in the science of nutrition and agriculture.	2.43 **Beginning Level** *Comprehension:* Describes various types of nutritional quackery and the role of governmental agencies in protection against them. **Intermediate and Advanced Levels** *Analysis:* Analyzes fad diets and food theories, from magazine articles and books for nutritional adequacy and accuracy.	2.43 Students view the film, "Nutritional Quackery," and identify four myths of nutritional quackery illustrated. Students explain the role of the Food and Drug Administration as a protection agency for consumers against quackery. (or) Students hear a speaker from Food and Drug Administration discuss claims of food faddists.

LEARNING EXPERIENCES

	Intermediate Level		Advanced Level
2.41	Students brainstorm for a list of food fads and discuss possible reasons why they were developed and followed.	2.41	Students take a pre-test on food fads. Students review test answers by checking in available resources. Given a chapter from a book by a well-known author on food fads (i.e., Adelle Davis, Gaylord Hauser, Fredericks and Bailey, and R. West), or "Fad diets" as reviewed in July 25, 1973 *Phoenix Gazette*, etc. The student will read, summarize, and report his findings to the class. Students will assess each book for factual information.
	Students select a food fad product for further investigation, and prepare an oral or written report. The report should include: – claims about the product – correct information to support the claims – information about the product which is partly true – question regarding claims or statements for the product.		
	Some items which might be researched are: blackstrap molasses, vitamin E tablets, Granola, weight reducing candy.		
2.42	Students develop a list of food fallacies or superstitions, and ask students from other classes to indicate which they believe are true. Summarize findings and report back to the "test" class why the fallacies lack substantiation.	2.42	Students develop a true-false test on fallacies for school paper. Students tabulate and publish test results pointing out the untruths.
*	Given a list of false or exaggerated claims about specific foods, students identify those which lack substantiation.		
2.43	Students collect various diets as: coach's diets for athletes, weight reduction diets, Zen macrobiotic diet, and diet for certain health problems as acne, or arthritis.	2.43	Students read articles in current magazines and newspapers about food faddists, quackery, food theories. Students assess the role of the Pure Food and Drug Administration in the control of misleading advertising.
	Students analyze each diet for adequacy, listing which of the basic food groups or basic nutrients are missing or inadequate.	*	Students view an advertisement promoting a particular food fad or fallacy. Students develop an advertisement taking the opposite view and explain reasons for their advertisement. Several ads might be used.
*	Students consider what might be the consequences of following these diets for a prolonged period.		

Topical Outline

2.0 Factors Affecting Consumer Food Choices
- "Organic" Foods
- Health Foods

2.44 Sources of Reliable Information

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
– Organically grown foods or "organic" foods are generally considered as those grown without use of chemical fertilizers, herbicides and/or pesticides. Since regulations for "organic" foods have not been developed, there is no way of assuring the authenticity of "organic" foods.	– **Beginning Level** *Comprehension:* Describes organic foods, their benefits and disadvantages. **Intermediate and Advanced Levels** *Application:* Uses nutritional knowledge in assessing the worth of organic foods.	– Students view some examples of "organically" grown foods and the same foods grown in the usual way. Students note the differences in appearance and cost. Students read references in magazines or journals and answer questions as: – What are "organically" grown foods? – What, if any, are the benefits to the consumer of organically grown foods? – How can one be sure of getting organically grown foods? * Students summarize the values of organic foods.
– Health foods and supplements claim special therapeutic or health value. Although they may make nutritional contributions they may cause health problems and higher food costs.	– **All Levels** *Analysis:* Relates "health" foods, their value and cost to similar standard items.	– Students visit "health food" stores and study the labels on various items. (Might select 2 examples from each of the four food groups.) Students list the information regarding nutritional content on the label, the price, and the amount. Students compare with similar item from standard supermarket.
2.44 The science of nutrition is constantly being researched. Reliable sources of new information should be used in evaluating nutritional claims for foods.	2.44 **All Levels** *Comprehension:* Explain why consumers need scientific basis for interpreting information about food and nutrition. **All Levels** *Believing:* Use reliable sources of information to interpret food and nutrition claims.	2.44 Teacher presents several examples of food fads or fallacies from advertisements, misleading books or articles and actual products, then asks, "Where could you find accurate information to evaluate the claims for these ideas or products?" Students list sources of information as nutrition books, dietitian, trained nutritionist, health departments, extension service.

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
– Students purchase some items of organic foods and prepare them, noting cost, palatability, length of time to prepare with similar foods that are mass produced.	– Students hear a debate between advocates of organic foods and those opposed to their use.
* Students develop posters or bulletin board showing the comparison in cost, flavor, and preparation time of organic and regular foods.	* Students develop an assembly program, or set up an exhibit or display illustrating organic foods and the fallacies involved with their use.
– Students prepare their own "health" foods as yogurt, sprouting beans, munch for hikers of dried fruits, nuts, and cereal. New recipes might be developed through experimentation.	– Students examine claims of vitamins and other food supplements, calculate their costs and obtain information about effect of high dosages. Students analyze advertisements for food supplements for accurate and misleading information.
Students calculate cost of preparing own health foods and compare with those in health food stores. (See Appendix 2.43 Recipes–granola, yogurt, bean sprouts.)	
2.44 Students hear speaker from one or more of the following groups speak on food fallacies and food faddism: – Better Business Bureau – Dietetic Association – Nutrition Council – Extension Service (specialist) – County Health Department – American Medical Association – Informed Individual – State Health Department Students will ask questions and evaluate information presented.	

Topical Outline
2.0 Factors Affecting Consumer Food Choices
  2.45 Additives and Preservatives
2.5 Consumer Guidance and Protection
  2.51 Consumer Responsibilities

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
2.45 Additives and preservatives are used to increase the nutritional value of food, to improve the cooking or baking of a food or food product, to enhance the color, flavor or texture of a food product and to delay the onset of food spoilage.	2.45 **Intermediate and Advanced Levels** *Analysis:* Using information on additives and preservatives, a student will determine whether or not to purchase foods containing additives and/or preservatives.	2.45 Learning experiences not appropriate for this level.
2.5 Federal, state, local, and private agencies work toward the protection and guidance of consumers in their purchase of foods.	2.5 **Beginning Level** *Comprehension:* Explains the guidance and protection available to the consumer by governmental and private agencies. **Intermediate Level** *Application:* Uses consumer protection and guidance services to collect information on a consumer problem. **Advanced Level** *Synthesis:* Develops a plan for utilizing consumer protection and guidance services.	2.5 The students will watch for news items or guidance and protection affecting the food consumer and bring newspapers and magazine articles concerning these events to class. The students will discuss and display items on a bulletin board. The students will read or hear teacher read President John F. Kennedy's special consumer address to Congress in 1962 outlining the four rights of consumers, and President Nixon's Consumer Message to Congress in 1969. (See *Consumer Education and Management Guide* page 191.) Students discuss messages and the need for consumer guidance, protection and rights.
2.51 Quality, quantity and safety of food can be contributed to by the informed and involved consumer.	2.51 **Beginning Level** *Comprehension:* Interprets consumer rights and responsibilities. **Intermediate Level** *Application:* Uses consumer protection and guidance services to solve consumer problems.	2.51 The students role play a consumer returning a food product to the store, and portray the resulting consequences based upon various situations as: – manager most cooperative – consumer irate and irrational – manager uncooperative – consumer knowledgeable about rights * Students summarize the effect of a consumer knowing his rights and responsibilities may have on receiving satisfaction for defective merchandise.

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
2.45 Students listen to a baker (if available) explain process and reasons for using preservatives and additives. Give students an opportunity for asking questions.	2.45 Students view filmstrip, "Tell Why of Food Additive," and discuss common reasons for using additives and preservatives in food and give their benefits or disadvantages.
2.5 The student will set up a step by step procedure for obtaining advice and information from various sources as: – Better Business Bureau – Retail Merchants Association – Store managers – Government agencies The student will contact one of the above sources by telephone or in person to obtain information on a specific matter of consumer food purchasing as: – meat inspection stamps – explanation of unit pricing or single item pricing – date labeling on perishable items – discrepancies in weight between amount on label and actual weight	2.5 The student will select a food product and trace it from first stages of production to the consumer. List and discuss the various procedures it goes through and identify the consumer protection and guidance built in at various points. The student will investigate and discuss the people, places and publications which commonly provide consumer information, advice and aid. * From the discussion, students develop a "Directory of Consumer Aid and Information." Independent Activity : The student will explain the metric system, how it converts from the present (English) system and how it would affect the consumer.
2.51 Students role play a situation in which a consumer returns defective merchandise, but the store refuses to do anything about it. Students suggest what might be some courses of action which the consumer could then use as: contact the manufacturer, or Better Business Bureau, etc.	2.51 The student will research and write a short paper explaining one of the following statements: – For every right the consumer enjoys, there is a related responsibility he should accept. – It is a consumer's responsibility to report unfair business practices to proper authorities. – Consumers, business, and government share the responsibility for keeping the market place fair and honest. – Consumer rights are of little interest to businessmen or to government. – Consumers should share in business profits.

Topical Outline

2.0 Factors Affecting Consumer Food Choices
  2.51 Consumer Responsibilities (Continued)
  2.52 Shopping Etiquette
2.6 Buying Guides for Selected Foods
  2.61 Fruits and Vegetables

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
	Advanced Level *Evaluation:* Assesses statements relative to consumer rights and responsibilities for accuracy and validity.	
2.52 Conduct and shopping habits of a consumer affect the store personnel, other shoppers, and food prices.	2.52 **All Levels** *Comprehension:* Explains the effect conduct and shopping habits of consumers have on store personnel, other shoppers, and food prices.	2.52 The students will role play situations showing undesirable shopping practices such as squeezing produce, knocking over packages, opening packages, shoplifting, eating, leaving items in wrong place, letting children wander unattended, keeping checkout line waiting while getting other items. Students discuss how other shoppers, checkers, and stockers feel about this, and the effect on prices of groceries.
2.6 When the consumer knows and uses recommended guidelines in purchasing foods, a more economical use of resources and a contribution to health will be made.	2.6 **Beginning Level** *Knowledge:* Identify guidelines and sources of information needed for food purchases. **Intermediate and Advanced Levels** *Application:* Apply recommended guidelines when selecting food products.	2.6 Students are given a list of foods to be purchased and they respond to questions such as: – What kinds of information would be needed before making a wise purchase? – Where could information be obtained about the foods? – What might be the result of buying a product without using any guidelines? – How can guidelines affect the cost of the foods you purchased?
2.61 When grade, color, size, shape maturity, freedom from defect, and season are considered, a more intelligent selection of fresh fruits and vegetables can be made.	2.61 **All Levels** *Application:* Solves consumer problems related to selecting fruits and vegetables, using guidelines as sources of information.	2.61 Given an assortment of fresh fruit and vegetable items students, in judging rings, determine the highest quality produce and identify reasons for this placing. Sharing this information students make a list of buying guidelines for vegetables and fruits.
When purchasing processed fruits and vegetables, the consumer used information on the label which describes the food in the can or package.		Students open jars and cans of one processed food such as fruit cocktail or tomatoes, and observe the differences in quality; amount of juice, syrup or water; price; taste; color; size of pieces.

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
	– It is a consumer's responsibility to read labels, and follow instructions for use.
	* The student summarizes his paper by stating his opinions and values about the information found in research.
2.52 Students make up list of "Shopping Ten Commandments" for shoppers to follow. With merchants' permission, students display list through use of posters and/or signs in different areas of local food markets.	2.52 Students hear local food store manager or owner speak on the effects poor shopping etiquette has on food prices. Students determine what can be done to improve shopping conduct and habits.
2.6 Using a shopping list provided by the teacher students research for available information on how to buy each listed item. Students share information and develop common guidelines for purchasing food.	2.6 Students perform "Food Selection Skit" (See Appendix, page A-9.) Students identify some of the kinds of information the food consumer needs to know to make wise selections as cuts of meat and how to prepare them, nutrient value of foods, various forms of foods, etc.
2.61 The students will read and devise a calendar showing the fresh fruits and vegetables available each month in their area. Months in which the supply is most plentiful and/or when least expensive will be specially marked.	2.61 The students will visit fresh fruit and vegetable section of market and hear a demonstration/lecture by manager on qualities to look for in purchasing fruits and vegetables.
Students develop menus using seasonal fruits and vegetables when possible and indicate use of processed products when seasonal foods are unavailable or not as economical.	* Students when presented with fresh fruits and vegetables of varying qualities, select those showing higher quality and give reasons for their selection. (or) Students read references on purchasing fresh or processed fruits and vegetables. Students visit store and note items of good or poor
Students examine a display of frozen and canned vegetables in	

Topical Outline

2.0 Factors Affecting Consumer Food Choices
    2.61 Fruits and Vegetables (Continued)
    2.62 Meat, Fish, Poultry, and Eggs

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
		Beginning Level Students respond to questions as: – What differences do you observe? – What effect might the differences have on use? – What accounts for the taste variation? – Why are the jars and cans different prices? – Will all jars and cans have the same number of servings?
2.62 When grade, the amount of bone to muscle, cost per serving and intended use are considered a satisfactory selection of meat, poultry and fish may be made.	2.62 **All Levels** *Application:* Solves consumer problems related to selecting meat, poultry, fish, and eggs using guidelines as sources of information.	2.62 Teacher demonstrates the differences in ground beef and soy substitutes by using 5 patties, (one of hamburger, one of ground chuck, one of ground round, one of soy-meat, and one of ground sirloin) and broiling or frying them. Students taste and describe results as to taste, size, and cost. The students observe eggs of varying sizes and quality to identify characteristics of each grade and size. Students observe change in quality when an egg is allowed to stand in a warm kitchen for several hours before breaking. Students note difference in volume when egg whites of differing qualities and conditions are beaten. * Students will take the quiz, "What Do You Know About Egg?" (See Appendix, page A-12) to assess their comprehension.

LEARNING EXPERIENCES

Intermediate Level

which some are dented, leaking, or swelled; and packages are limp, heavily frosted or wet. Students express reasons for not buying those items.

2.62 Use experience for Beginning Level, but students will choose the appropriate type of ground meat or substitute for a particular dish. Example: hamburgers on bun, salisbury steak, casserole.
(or)
Students calculate the cost per serving of broilers, fryers, roasting chicken, capon, stewing chicken, roast turkey, and Cornish hen. Students decide which forms of poultry would be used in preparing dishes such as creamed chicken, fried chicken, chicken and noodles, chicken salad, and stewed chicken and give reasons for their selections.
(or)
Students view the film, *Know the Eggs You Buy*, and review information about egg size and grades.

* Students will select appropriate grade and size of eggs for an omelet, cake mix, fried eggs, meringue.

Advanced Level

quality. (Use "Help–Apples to Zucchini,")
(or)
Students list vegetables and fruits which can be purchased in several different forms: fresh, frozen, canned, dried. Students compare price and quantity for each form, the nutritive value at the time of purchase, and possible changes in their food value.

Students examine the labels on a variety of canned and frozen fruits, and vegetables noting information as: grade, amount, price, style. Open cans of the same item, but of varying quality, characteristics and brands. Students identify purposes or kind of dish for which each may be used, taking into consideration family preferences and economy.

2.62 Students view film, *Selecting and Preparing Beef*, on selecting, preparing, and serving various cuts of beef. They apply the principles learned by selecting the most economical cut for a specific situation such as a large family gathering, entertaining the "boss," a backyard cookout, etc.
(or)
The student will choose two different sizes and qualities of eggs to prepare one of the following: angel food cake, custards, puddings, omelet, meringue, egg souffle, fried eggs.

* Students write their conclusions on a guide as shown in Appendix, page A-14. The students will make generalizations regarding the influence of the quality of eggs on the finished product.
(or)
Students make a chart showing a comparison of the cost per serving of beef, pork, lamb, veal, poultry, and fish to be prepared in a similar manner. Students draw conclusions as to most economical meat for various occasions.

Topical Outline

2.0 Factors Affecting Consumer Food Choices
    2.63 Milk and Dairy Products
    2.64 Breads and Cereal Products
    2.65 Fats and Oils

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
2.63 When intended use, storage, total food costs and nutritive value are considered in selecting the form of milk and milk products, a more satisfactory selection can be made.	2.63 **Beginning Level** *Comprehension:* Summerizes guidelines in selecting forms of milk. **Intermediate and Advanced Levels** *Application:* Solves consumer problems related to selecting milk and milk products using guidelines as sources of information.	2.63 The students will sample a number of different milk forms, summarize information as to taste preference, cost, calories, nutrients, and use.
2.64 Bread and cereal products vary in flavor, texture, size, appearance, cost, and nutritive value depending upon the method of processing and type of food into which the grain is made.	2.64 **All Levels** *Application:* Applies principles of buymanship in selecting bread and cereal products.	2.64 Students bring samples of a grain product to show the variety of forms available in today's markets. (Example may be wheat, whole grain, cracked, meal, flakes, germ, prepared crackers.) Students list the differences in appearance, form, personal preference, and in amount of time and energy needed for preparation.
2.65 When intended use, storage, total food costs, and nutritive value are considered in selecting the type of fat, a satisfactory selection can be made. – cooking and salad oils – plastic shortenings – spreads	2.65 **Beginning Level** *Comprehension:* Explains choice of spreads in relation to needs and cost. **Intermediate and Advanced Level** *Analysis:* Differentiates choices of fats and oils by establishing buying guides.	2.65 Students view an exhibit of the various forms of spreads including diet, regular, vegetable, animal, salted, unsalted, whipped, solid, and a variety of containers. Students sample spreads on bread and read package information to determine nutritive value, use, and cost per pound.

LEARNING EXPERIENCES

Intermediate Level

2.63 Students read "How to Buy Cheese," U. S. Department of Agriculture or other resource materials.

Students sample cheese from cheese tray and fill out chart already listing varieties sampled to determine characteristics and use.

2.64 Students will compare the cost and food value of ready-to-eat, sweetened ready-to-eat, and cooked cereals by examining products in stores or ads. Students note cost differences when "extras" such as coupons, toys and contests are included.

2.65 Students in groups research the differences between animal and vegetable fats. Students share this information by compiling lists on the chalkboard showing the differences giving source, color, any distinctive flavor, necessary storage, and cost.

Advanced Level

2.63 Students evaluate teacher prepared menus with recipes (which include various forms of milk, milk products and milk used in prepared dishes) to determine what various forms of milk and milk products were used.

Students respond to questions as:
- Could other forms of milk or milk products replace the forms used?
- Would using another form change the costs?
- Would using another form change nutritive value?
- Under what conditions might you want to change nutritive value and costs?

2.64 Students will prepare quick breads
- from basic ingredients
- from home-type mix
- from prepared mixes.

The results are compared giving consideration to cost, time, energy in preparation, flavor, texture, and appearance of the product, and personal and family values.

2.65 Students visit supermarkets to gather information related to packaging of cooking and salad oils and shortening. Students make a response to:
- kinds of information found on label
- cost per pound
- confusion in packaging
- storage needed
- suggested uses

Topical Outline
2.0 Factors Affecting Consumer Food Choices
2.66 Convenience Foods

BEST COPY AVAILABLE

CONCEPTUAL STATEMENTS

2.66 Convenience foods facilitate serving not otherwise possible due to limited time, energy, and equipment.

STUDENT OBJECTIVES

2.66 **Beginning Level**
Comprehension: Restates effect time and energy have upon the use of convenience foods.

Intermediate and Advanced Levels
Analysis. Conclude the condition under which a consu[illegible] may wish to use convenience foods.

Beginning Level

2.66 Students view filmstrip, *The In Way to Meal Making*, and discuss the ways packaged foods facilitate the serving of foods hot, otherwise impossible due to limited time, energy, or equipment.
(or)
Students participate in a discussion "Convenience Foods that Help My Mother."

LEARNING EXPERIENCES

Intermediate Level

2.66 Students research the history of convenience foods and show how they have changed or been refined over the years. Students bring in advertisements or samples of new products developed during the past year. Compare cost of a same size bakery cake, frozen cake, and cake mix (add cost of eggs and heat for baking). The student draws conclusions relative to the amount of pre-preparation needed and cost. Students select other examples to compare—pies, waffles, biscuits.

Advanced Level

2.66 Students divide into kitchen groups. Each group prepares the same menu such as chicken, mashed potatoes, peas, and applesauce. One group prepares a frozen complete dinner; another group prepares each food from scratch; a third group uses individually packaged convenience items and a fourth group uses some convenience foods and some foods from scratch. Students compare and contrast taste, cost per meal, preparation time, and equipment needed. Students determine under what conditions a consumer might want to use any one of these.

TOPICAL OUTLINE

- 3.0 Factors Affecting Food Selection
  - 3.1 Guides for Food Selection
  - 3.2 Nutrients Needed for Health and Growth
    - 3.21 Nutrients
      - 3.211 Proteins
      - 3.212 Carbohydrates
      - 3.213 Fats
      - 3.214 Vitamins
      - 3.215 Minerals
      - 3.216 Water
  - 3.3 Availability of Nutrients to Body Use
    - 3.31 Breaking Down Food into Nutrients
    - 3.32 Basal Metabolic Rate
    - 3.33 Weight Control
  - 3.4 Evaluation of Nutritional Status
    - 3.41 Factors Which Influence Nutritional Status
    - 3.42 Methods Used to Measure Nutritional Status
  - 3.5 Individual Variations for Nutrients and Calorie Needs
    - 3.51 Pregnancy and Lactation
      - – Normal Pregnancy
      - – Teenage Pregnancy
    - 3.52 Childhood
    - 3.53 Teenagers
    - 3.54 Adults
  - 3.6 Nutrition Related to Abnormal Conditions
    - 3.61 Research Correlating Nutrition to Disease
    - 3.62 Infection
    - 3.63 Dental Health
    - 3.64 Alcoholism
    - 3.65 Drug Use and/or Addiction
  - 3.7 Environmental Influences on Nutritional Health
    - 3.71 Socio-Psychological Influences
      - 3.711 Expression of Human Emotions
      - 3.712 Communication
      - 3.713 Socializing Influence
        - – Party Foods
      - 3.714 Food Preferences
      - 3.715 Sensory Enjoyment
    - 3.72 Cultural Influence
      - 3.721 Ethnic Background
      - 3.722 Religious Heritage
      - 3.723 Holiday Foods
      - 3.724 Effect of Mobility
    - 3.73 Effect of Malnutrition
      - 3.731 Interrelated Factors in Malnutrition
      - 3.732 Malnutrition in the World
      - 3.733 Hunger and Malnutrition in the United States
    - 3.74 Food in the Future

BIBLIOGRAPHY

Books

Bogert, **L. Jean**, **Briggs**, **George M.**, **Calloway**, **Doris H.** *Nutrition and Physical Fitness*, 9th ed., Philadelphia: W. B. Saunders, 1973.

Bowes and Church. *Food Values of Portions Commonly Used.* 11th ed., Philadelphia: J. B. Lippincott Co., 1969.

Cote, Patricia. *People, Food, and Science.* Boston: Ginn and Company, 1968.

Desrosier, Norma and Rosenstock, Henry. *Radiation Technology in Agriculture and Biology.* Westport, Connecticut: Avi Publishing Co., 1960.

Deutsch, Ronald M. *The Family Guide to Better Food and Better Health.* Des Moines, Iowa: Meredith Corporation, 1971.

Eppright, Ercel, Pattison, Mattie, Barbour, Helen. *Teaching Nutrition,* 2nd ed. Ames, Iowa; Iowa State University Press, 1963.

Fleck, Henrietta C. *Introduction to Nutrition,* 2nd ed. New York: Macmillan Company, 1971.

Laidlaw Health Series. *Health,* River Forest, Illinois: Laidlaw Brothers, 1966.

Leverton, Ruth M. *Food Becomes You,* 3rd ed., Ames, Iowa: Iowa State University Press, 1965.

Lowenberg, Marian, et al. *Man and Food,* Chapters Six and Seven, New York: John Wiley & Sons Inc., 1968.

Martin, Ethel Austin. *Nutrition in Action,* 3rd ed., Dallas: Holt, Rinehart & Winston, Inc., 1971.

Mayer, Jean. *Overweight: Causes, Cost, and Control,* Englewood, New Jersey: Prentice Hall, Inc. 1968.

Medved, Eva. *The World of Food,* Boston: Ginn and Company, 1970, pp. 450–460.

Mitchell, Rynbergen, Anderson, Dibble. *Cooper's Nutrition on Health and Disease,* 15th ed., Philadelphia: Lippincott, 1968.

Richmond, Julius B., M.D., et al. *Health and Growth, Book Eight,* Glenview, Illinois: Scott, Foresman and Co., 1972.

Robinson, Corinne H. *Basic Nutrition and Diet Therapy,* 2nd ed., New York: Macmillan Co., 1970.

Sinacore, Joan S. *Health, a Quality of Life,* New York: Macmillan Co., 1968.

Sinclair, Upton. *The Jungle,* (Reprint 1906 ed.), Cambridge, Massachusetts: Robert Bentley, Inc., 1971.

White, Ruth Bennett. *You and Your Food,* 3rd ed., Englewood Cliffs, New Jersey: Prentice Hall Inc., 1971.

Pamphlets

American Association of Health, Physical Education and Recreation, 1201 Sixteenth Street, N.W., Washington, DC 20036. *Nutrition for Athletes – A Handbook for Coaches.* 1971.

Cooperative Extension Service, Clemson University, Clemson, South Carolina. *Nutrition Games, Puzzles, and Things To Do.* 1971.

Dairy Council of Arizona, 3737 E. Indian School, Phoenix, AZ 85018, 717 N. Swan Rd., Tucson 85711.
Animal Feeding Demonstrations for the Classroom
Animals That Give People Milk
Boy and His Physique
Calcium in Nutrition
Choose Your Calories by the Company They Keep
Feeding Little Folks
Feeding Your Baby at Your Breast
Feeding Your Baby During His First Year
Food and Care for Dental Health
Food Before Six
Food Way to Weight Reduction
Girl and Her Figure
Great Vitamin Mystery
Guide to Good Eating
How Your Body Uses Food
Nutrition Source Book
Personalized Weight Control
Weight Control Source Book
What Did You Have for Breakfast This Morning?
What to Eat Before You Are Pregnant, While You Are Pregnant, After the Baby Comes
Your Food Chance or Choice?

Division of Home Economics Education, Department of Vocational and Technical Education, University of Illinois, Urbana, IL 61801.
Who Needs Calcium?, by Carolyn J. Wax
Get Lost, Extra Pounds, by Cynthia Theiss
Approximate Nutritive Values of Common Foods, by Gail VanderJagt
Shopping for Protein, by Carolyn J. Wax

General Foods Corporation, 250 North Street, White Plains, NY 10602. *Additives and How They Serve You.*

Manufacturing Chemists Association, 1825 Connecticut Ave., N.W., Washington, DC 20009. *Everyday Facts – Food Aditives.*

Maricopa County Health Department, 1825 East Roosevelt, Phoenix, AZ 85006. *The Iron Story.* 1969.

Massachusetts Department of Education, *Focus on Nutrition–A Teacher's Handbook for Nutrition Education Grades Kindergarten through Six*, 1970. Bureau of Nutrition Education and School Food Services, Department of Education, Commonwealth of Massachusetts, 02111. $3.95. 69 pages.

Nutrition Education Service Center, Montclair State College, Upper Montclair, New Jersey. *Teach Nutrition With Games.* 1972. 20 Cents per copy.

School Health Education Study, Minnesota Mining and Manufacturing Co., St. Paul, Minnesota. *Teaching-Learning Guide for Concept 10, Levels 1, 2, 3, 4.* 1972.

Standard Brands Education Service, P.O. Box 2695, Grand Central Station, New York, NY 10017. *Mr. Peanut's Guide to Nutrition.* 1970.

United Nations.
  FAO, Population and Food, Supply No. 7, p.15.
  FAO, The Basic Freedom, Freedom From Hunger, pp. 15–16.
  FAO, What It is, What It Does, How It Works. 1964.

United Nations Children's Fund, Oceana Publications, Inc., Dobbs Ferry, New York. *Toward a Better World for Children.* 1963.

United States Department of Agriculture, Government Printing Office, Washington, DC 20402.
  Family Fare – A Guide to Good Nutrition. Home and Garden Bulletin No. 1, 1970.
  Food and your Weight. Home and Garden Bulletin No. 74.
  Food Stamp Handbook for Volunteers.
  Nutrition – Food at Work for You. Reprinted from Home and Garden Bulletin No. 1, *Family Fare*, Separate 1,1971.
  Nutritive Value of Foods. Home and Garden Bulletin No. 72, 1971.

University of New York and State Education Department, Albany, NY 12224. *Physical Health – Nutrition for Grades 7, 8, and 9.* 1970.

Vocational Education Division, State Department of Education, Columbus, Ohio. *Home Economics Curriculum Guide for Ohio.* 1966.

Articles and Periodicals

Food Technology, December, 1964. "The World's Food – The Problems," by U. K Slater. pp. 1891–1894.

Illinois Teacher, Home Economics Education, University of Illinois, Urbana, IL 61801. "Home Economics for the Seventies – Accent on Nutrition for Consumers," Vol. XIV, No. 1, September/October, 1970.
"Nutrition Education for Increased Humaneness," Vol. XVI, No. 1, September/October, 1972.

Journal, American Dietetic Association, Vol. 45, 1964, pp. 315–320. "Our Share in Better World Nutrition."

Journal, American Home Economics Association, September, 1969, 61:499. "The White House Conference on Food, Nutrition and Health."

Journal of Nutrition Education.
"Food Habits: A Selected Annotated Bibliography," Vol. 5, No. 1, Supplement 1, January–March, 1973.
"Methods and Kinds of Nutrition Education: A Selected Annotated Bibliography (1961–72)," Vol. 5, No. 1, Supplement 2, January–March, 1973.
"Nutrition Education and the Spanish-Speaking American: An Annotated Bibliography (1961–72)," Vol. 5, No. 2, Supplement 1, April–June, 1973.

Nutrition Today, Vol. 7, No. 4, July/August, 1972, pp. 4–11. Official Report: "Highlights from the Ten-State Nutrition Survey."

Today's Health, October, 1969. "Faces of Hunger."

Films and Filmstrips

Arizona State University Audio Visual Library.
Man as Hunter and Food Gatherer
Man in the Sea – The New Frontier
Measuring Up
Space Flight Around the Earth
The Lower Fungi

Association Films, Inc., 1108 Jackson, Dallas, Texas. *Hungry Angels.*

Coronet Films, Coronet Building, Chicago, Illinois.
    Food That Builds Good Health
    The Cell – Structural Unit of Life

Dairy Council of Arizona, 3737 E. Indian School Road, Phoenix, AZ 85018; 717 N. Swan, Tucson, AZ 85711.
    Feeding Your Young Children, (filmstrip)
    Food, the Color of Life (film)
    How Food Becomes You, (filmstrip)
    Uncle Jim's Dairy Farm
    Your Food – Chance or Choice, (filmstrip)

Dairy Council of California, 2775 Cottage Way, Suite 19, Sacramento, CA 95825. *Vitamins from Food.*

Elementary Nutrition Filmstrips, National Livestock and Meat Board, 36 South Wabash, Chicago 60603. *The Power of Food.*

Henk Newenhouse, 1825 Willow Road, Northfield, IL 60093.
    Food, Energy and You
    How a Hamburger Turns Into You

Modern Talking Pictures Service No. 3232. *A Grain of Salt.*

United States Department of Agriculture, Washington, DC. *How Food Affects You.*

Other Materials

NASA Public Information Office, 400 Maryland Avenue, S.W., Washington, DC 20546.

Topical Outline

3.0 Factors Affecting Food Selection
  3.1 Guides for Food Selection
  3.2 Nutrients Needed for Health and Growth

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
3.0 A balanced diet, selected from a variety of foods, can affect the quality of life and health.	3.0 **All Levels** . *Comprehension:* Summarizes by listing the various factors affecting food choices. *Valuing:* Chooses voluntarily a wide variety of foods for his daily diet.	3.0 (Introductory experiences) The students hold a food "auction" in which pictures of various foods are sold to highest bidder. Students then give reasons why they bid on a particular food. Students give opinions on the nutritional value of the food pictured.
3.1 Food selection guides provide direction for the kinds and amounts of food one needs to eat each day.	3.1 **Beginning and Intermediate Levels** *Application:* Demonstrates how a food selection guide can provide direction for daily food choices. **Advanced Level** *Synthesis:* Plans a weekly menu according to the Basic Four Food Groups.	3.1 Students make a collage of their favorite foods using pictures from magazines or drawing pictures. By the use of charts, overhead projector, or other means, the teacher presents the use of the Basic Four Food Groups as a means of selecting foods for nutritive content. * Students evaluate their collages by listing the foods on the collage in the correct group. Using the collage and the Basic Four Food Groups, students select a day's menu to meet these requirements.
3.2 Food is made of nutrients necessary for energy, growth and maintenance of a healthy body.	3.2 **Beginning Level** *Knowledge:* Recognizes the six nutrients and their role in growth, energy, and general well-being.	3.2 Students pick a picture from a magazine which represents the type of person they would like to be (must be realistic). List items needed to improve to reach goal. By use of films, filmstrips, charts, and other research materials determine nutrient's role in self-improvement. With the help of the teacher, summarize role of each nutrient. * Use a game procedure for evaluation. (See Appendix, p. A-16 .)

LEARNING EXPERIENCES

	Intermediate Level		Advanced Level
3.0	Students are given a list of foods (may be pictures, menus from eating establishments, or lists). Students select foods for one 24-hour period. By use of buzz groups, graffiti paper, or other devices determine reasons people have for various choices.	3.0	(See Beginning or Intermediate Level.)
*	Students summarize reasons.		
3.1	In groups, brainstorm the statement, "Instinct is not a reliable guide for food choices." Have groups list reliable guides.	3.1	Plan a week's menus according to the Basic Four Food Groups, using a variety of foods.
*	Using the Basic Four Food Groups, students evaluate a day's menu (proposed by teacher) which does not meet the minimum requirements of the daily food guide and fill in foods that would meet the minimum requirements.		
	(For Basic Four review, see Food Bingo game, Appendix, p. A-15.)		(See Intermediate Level.)
3.2	Using a bulletin board, have pictures showing attractive hair, eyes, skin, etc. Committees of students choose areas of interest. Using resource material, identify nutrients and food sources necessary for that area.	3.2	Students divide into committees and select an activity that provides a review of nutrients. These might include puppet shows, commercials, assembly programs, skits. Reference: *The Great Vitamin Mystery*
	Students take Nutrition Pretest. (See Appendix, pp. A-17, 18.)		(See Intermediate Level)

Topical Outline

3.0 Factors Affecting Food Selection
3.21 Nutrients
3.211 Proteins

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
3.21 The body needs the six nutrients (proteins, carbohydrates, fat, vitamins, minerals and water) rather than specific foods.	3.21 **Beginning Level** *Comprehension:* Explains the six nutrients and their role in growth, energy and general well-being. **Intermediate Level** *Application:* Demonstrates the six nutrients the body needs and the major sources of each nutrient. **Advanced Level** *Analysis:* Diagrams the nutrients and the function in the body.	3.21 (Teacher prepares collection of pictures in pairs of contrasting well-nourished and malnourished people.) Students describe contrasts in pairs of pictures of well-nourished and malnourished people and tell how the food they ate might help to explain the differences: – in growth – in energy – in appearance of skin, hair, teeth (For the following series of experiences the teacher prepares: – chart for students to record for each nutrient its function in the body and sources – collection of food pictures or models common in the community which include sources of all nutrient groups).
3.211 The principal function of proteins is to build new tissues for growth, to repair tissues, and to maintain tissues. Proteins which are essential to life are complex chemical compounds made of varying combinations of chemical units called amino acids.	3.211 **Beginning Level** *Comprehension:* Explains a test for protein, what proteins are, and their function in the body. **Intermediate Level** *Synthesis:* Plans meals which supply adequate protein for a particular individual.	3.211 Students conduct tests for protein as follows: Using a candle or a bunsen burner, burn a small feather. The resulting odor is characteristic of protein. Use this test to determine the presence of protein in foods. If the burning feather odor results, protein is present. Test protein, incomplete protein and non-protein foods. Students view film, *How a Hamburger Turns Into You*, Dairy Council of Arizona. Students use Food

LEARNING EXPERIENCES

Intermediate Level

3.21 Teacher prepares several small signs with the name of one of the nutrients on each. Students use a nutritive value chart and identify each item in a food display with a sign showing its greatest contribution. (Example: ground beef – protein.) Some foods may have more than one sign. The display might include such foods as: eggs, cheese, carrots, breads, soft drinks, milk, prunes, and potato chips. Students group together those with high nutritive value and those with low nutritive value.

* Students demonstrate the meaning of the statement: "The body needs the six nutrients rather than specific foods."

3.211 Students list all foods eaten in the last twenty-four hours and note those high in protein. Students use a nutritive value chart to compute amount of protein eaten. Students indicate what foods might be added to improve amount of protein consumed.

Students compare protein content and cost of various protein foods. (Example: hamburger and eggs) Students discuss sources of protein for person on a vegetarian diet.

* Students plan a vegetarian meal which has adequate supply of protein.

Advanced Level

3.21 Students complete "Nutrition Crossword" in the Appendix to review their knowledge of nutrients. Students prepare a bulletin board to illustrate the three major nutrient functions in the body:

- furnish heat and energy
- provide materials for building and maintaining body tissues
- supply substances that serve as regulators of body processes.

(Appendix, p. 19)

3.211 Animal feeding experiment: Students feed, care for and weight two pairs of rats (three weeks old). One pair is fed an adequate diet with protein coming from meat and milk. The other pair receives the same diet except that gelatin powder supplies the protein. Students observe difference in growth over a period of weeks. Students will draw conclusions regarding complete and incomplete proteins.

Continue experiment with both pairs on the same diet. Students note if the pair on the gelatin diet ever catches up to the others. Students discuss value of gelatin as a "health" food for strengthening fingernails. (For additional information on animal feeding demonstrations for the classroom, contact Dairy Council of Arizona.)

Topical Outline

3.0 Factors Affecting Food Selection
3.211 Proteins (Continued)
3.212 Carbohydrates
3.213 Fats

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
	Advanced Level *Evaluation:* Evaluates the effect of protein on growth and well-being.	**Beginning Level** Models from Dairy Council of Arizona to identify protein foods. Students develop chart showing function of protein in the body, the amounts needed, consequences of a lack of protein, and good sources of protein.
3.212 Carbohydrates provide work energy for body activities; heat energy for maintenance of body temperature; excess amounts may be stored in the body. Carbohydrates are starches, cellulose, and sugars manufactured by plants and are the most plentiful source of heat and energy.	3.212 **Beginning Level** *Comprehension:* Describes the sources and functions of carbohydrates. **Intermediate Level** *Analysis:* Analyzes carbohydrate foods for sugar or starch content. **Advanced Level** *Evaluation:* Evaluates his daily food consumption for adequate carbohydrate intake.	3.212 Students recall from past study as much as they can about what a carbohydrate is, what it does in the body, and where it is found in food. Students select from a collection of foods the ones rich in carbohydrates and group them together with a label. Students use the following experiment to illustrate starches turn sweet when chewed. Place a small piece of cracker in your mouth. Does it taste sweet? (No) Now chew the cracker and it tastes sweet. The saliva changes starch to sugar.
3.213 Fats provide energy and heat for body activities; act as a reserve of energy; provide a protective covering for nerves, muscles, and internal organs; serve as a carrier for fat soluable vitamins; provide satiety for appetite.	3.213 **Beginning Level** *Comprehension:* Describes sources and functions of fats in the diet. **Intermediate Level** *Application:* Applies information about amount of fats needed for his daily food intake.	3.213 Students conduct a test for fats as: Chop or mash a food sample, rub a small sample of food on a brown paper bag. Heat the paper with food on it over a light bulb. If grease stain is left on the bag, fat is present.

LEARNING EXPERIENCES

Intermediate Level

3.212 Students conduct tests to determine the difference between carbohydrate food containing starch and those with mostly sugar.

Test for Starch
Two tablespoons cornstarch–½ cup water. Then prepare a fresh solution of ½ teaspoon iodine and ½ cup water. Add a few drops of iodine solution to cornstarch solution. Results will be a purple solution. This means starch is present.

Test for Sugar
Put corn syrup in a test tube. Add 1 ounce of Benedict solution. Heat, and wait for blue color to change red-orange. This means sugar is present.

Give students pieces of orange, cookie, ripe bananas, meat, cheese, nuts, apples, and other foods. Students test to see if starch or sugar. (REMEMBER – 1 ounce of Benedict solution is needed with each piece to be tested.)

3.213 Students list foods they have had during the past 24 hours which are rich in fat.

Students compare the amounts of energy (calories) in each level tablespoon of butter and sugar and draw conclusions relative to the amounts of energy supplied by fats as compared to carbohydrates.

Advanced Level

* Students prepare a bulletin board illustrating "Protein Malnutrition," using news clippings, map of locations where protein malnutrition is commonly found, new sources of protein, types of protein deficiency diseases.

3.212 Students discuss questions as:

- Why are carbohydrates important in the diet?
- What happens when the body takes in excess amounts of carbohydrates?
- What happens when the body has insufficient carbohydrates for energy needs?

Students keep a record of their activities for 24 hours recording amount of time spent sitting, sleeping, walking, bicycling, etc. Students use energy expenditure chart to compute the amount of calories they expended.

Students check their allowance for calories in "Recommended Dietary Allowance" chart.

Students record the foods eaten in a 24-hour period and note those high in carbohydrates. Students calculate their total calorie intake and what percentage was in carbohydrate foods.

* Students evaluate their food intake and energy consumption to determine if they need to increase or decrease carbohydrate consumption.

3.213 Students read references to obtain information about cholesterol, saturated and unsaturated fats. Students prepare a display or bulletin board of foods high in saturated fats and their sources, and unsaturated fats and their sources.

Students hear a doctor, nurse or other authority discuss

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
		Beginning Level
	Advanced Level *Analysis:* Examines labels or advertisements for information on type of fat in a product and determines its possible relationship to blood cholesterol levels.	**Foods to Try**: Cheese, bacon, mayonnaise, peanut butter, egg white, lunch meat, egg yolk. – Have a tasting party of fatty foods such as butter, bacon, cheese, luncheon meat. * Students make a bulletin board of foods rich in fat.
3.214 Vitamins are chemical substances which have important functions affecting growth and reproduction, influencing the condition of skin, hair, eyes, teeth, gums and nerves, improving resistance to infections and working with other nutrients for body regulation. – Vitamins occur in plant and animal tissues.	3.214 **Beginning Level** *Comprehension:* Summarizes the sources and functions of five essential vitamins. **Intermediate Level** *Application:* Applies information about vitamins to his own diet. **Advanced Level** *Synthesis:* Composes articles on vitamin deficiency diseases.	3.214 Students read and discuss, *The Great Vitamin Mystery*, Dairy Council of Arizona: (or) Students view film, *Vitamins from Food*, Dairy Council of California. Students discuss vitamins in food versus vitamin pills. Students make mobiles of food rich in certain vitamins using food models. * Students do Vitamin Crossword Puzzle. (See Appendix, p, A-22.)

LEARNING EXPERIENCES

Intermediate Level

Students read references to find out other purposes fat fulfills in the body.

Students examine "Recommended Daily Dietary Allowance" chart to find the amount of calories they should consume each day. Since no more than 30% of the day's calories should consist of fats, students multiply their calorie allowance by 30% to determine the amount of calories fats contribute to the diet. Students then divide this figure by 9 to arrive at the number of grams of fat needed. (Example: 2400 calories X 30% = 720 ÷ 9 = 80 grams of fat.)

Students use "Nutritive Value of Foods" charts and compute the grams of fat they have eaten in a 24-hour period. This figure is compared with the recommended allowances.

* Students identify what changes may need to be made in their fat intake.

3.214 Students as individuals or groups are assigned a specific vitamin to investigate and report to the class. Their report may be in a variety of forms–posters, bulletin boards, skits, talk, cartoons. The report should contain the following points:

- function of the vitamin in the body
- rich sources of the vitamin
- disease or symptons of a deficiency
- history of how vitamin was discovered

Advanced Level

relationship of saturated and unsaturated fats and blood cholesterol levels.

* Students collect labels or advertisements using word "poly-unsaturated," and determine what it means.

3.214 Students review the style of health articles in newspaper and magazines. Students select a vitamin for intensive study and prepare an article, newspaper story or "Advice to the Readers" column about the vitamin under the topic **Vitamin Facts and Fallacies.** Students write for reader interest and appeal. Articles may be developed on Vitamin E, use of Vitamin C for cold prevention, etc.

The articles are compiled into a nutrition newspaper or bulletin and distributed to school and community.

(Some students may prefer to develop a "comic strip" or illustrations for articles.)

Topical Outline

3.0 Factors Affecting Food Selection
    3.215 Minerals
    3.216 Water
3.3 Availability of Nutrients to Body Use

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
		Beginning Level
3.215 Minerals are non-living substances needed in regular supply in the diet for building body tissues and regulating body processes. Minerals are absorbed by plants from the soil and water and obtained by animals from eating foods from plant or animal sources.	3.215 **Beginning and Intermediate Levels** *Comprehension:* Describes the sources and functions of major minerals. **Advanced Level** *Analysis:* Analyzes the functions of minerals in the human body.	3.215 Students read chapter on minerals in text and summarize information. Students read *The Iron Story*, Maricopa Health Department. Students check box of salt at home and note how many say "iodized." Make a tally of the number that do use iodized salt. Students consider value of using iodized salt. * Students make food mobiles of food rich in minerals using food models.
3.216 Water is not changed in the digestive process, but serves as a solvent, regulates body temperature and makes up two-thirds of the body weight.	3.216 **Beginning Level** *Comprehension:* Explains the function of water in the body, and the ways the body obtains water and the amount needed. **Intermediate Level** *Application:* Computes the amount of water needed by the body and chooses ways of getting adequate liquid in the body. **Advanced Level** *Analysis:* Analyzes the role of water in various body processes.	3.216 Students give examples that food contains water: – juice when food is squeezed as an orange – water in pan when food is cooked as tomato, broccoli – drying out of uncovered bread or cake Students list other ways the body gets liquid besides from food. Students discuss which a person can do without longer–food or water. Students read references to find out the many functions of water in the body.
3.3 Metabolism is concerned with all of the chemical changes and the energy required to maintain internal body functions and external work.	3.3 **Beginning and Intermediate Level** *Comprehension:* Interprets what is meant by metabolism.	3.3 Students recall the reason why the body needs food: – for energy to work and play – to keep internal body processes going Teacher states that metabolism is the total of all the

LEARNING EXPERIENCES

Intermediate Level

3.215 Students observe a chicken bone which has been soaked in vinegar for several days. Students respond to questions as:

- What did the vinegar remove from the bone?
- What does calcium do for bones?
- Why didn't the entire bone dissolve?
- Since calcium is acculumated in the bones as we grow older, who needs the most calcium?

(Teacher notes that same effect does not occur in body when one eats something with vinegar since our bones are not soaked in the food we eat.)

* Students read references to find out what minerals the body needs and develop a chart showing their sources and functions.

3.216 Each student writes down her own weight and how much of it she thinks is water. Check references to determine what proportion of a person's weight is water.

Students list as many ways as they can think of in three minutes of getting liquid into the body.

Students recall how much water one should drink each day. Students give examples of factors that might alter that amount– living in a warm or dry climate, exercise, etc.

* Students tell as many functions for water in the body as they know. Use references to check accuracy and add others.

3.3 (See Learning Experiences at either Beginning or Advanced Level for adaptation at this level.)

Advanced Level

3.215 Students burn small pieces of egg yolk, carrot, cheese, meat and observe the ash which is grayish indicating presence of minerals. Students burn sugar and compare its ash with that of foods containing minerals.

Students trace the path of a mineral from the soil into the human digestive system.

* On a large outline of the body, students will diagram the minerals needed by the body and their main functions.

3.216 Students read references and determine the role of water in the body in the following processes:

Oxidation
Circulation system
Osmotic pressure
Maintaining body temperature
Excretion
Hydrolysis
Digestive system
Dehydration

3.3 Teacher presents an analogy between a living cell and burning candle, noting that both are in a constant state of change. Students respond to questions as:

- Where does the candle get the materials for the flame? (Wax) (Teacher comments that the molecules of carbon

Topical Outline

3.0 Factors Affecting Food Selection
  3.3 Availability of Nutrients to Body Use
    3.31 Breaking Down Food into Nutrients
    3.32 Basal Metabolic Rate

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
	Advanced Level *Application:* Demonstrates the meaning of metabolism.	**Beginning Level** processes involved in supplying energy for body needs. To show increase in energy need (metabolism), count the number of times a student breathes while sitting quietly; repeat after student has hopped on one foot for one minute.
3.31 When food is ingested, each person metabolizes it according to the uniqueness of his own body.	3.31 **Intermediate and Advanced Level** *Analysis:* Briefly diagrams the basic principles of digestion in order to understand the use of food in the body.	3.31 Using charts and diagrams in *Mr. Peanut's Guide to Nutrition,* students show how food is digested. (Use of overhead projector would be helpful.)
3.32 When the role of basal metabolism in body use of nutrients is recognized, it is easier to understand individual differences in the way the body uses food.	3.32 **Beginning and Intermediate Level** *Application:* Demonstrates by performance pictures understanding of basal metabolic activity. **Advanced Level** *Synthesis:* Computes basal metabolism from information or weight and sex of individuals.	3.32 To show increase in energy need (metabolism), count the number of times a student breathes while sitting quietly; repeat after student has hopped on one foot for one minute. Students discuss basal metabolism and body differences.

Intermediate Level

3.31 Students view film *How a Hamburger Turns Into You*, or *How Food Becomes You*, (Dairy Council of Arizona) and respond to questions about the film, or students read booklet, *How Your Body Uses Food*, (Dairy Council of Arizona) and carry out activities suggested in booklet.

Students mix crushed samples of food such as hamburger, shortening, sugar, milk, butter, starch with water. Students respond to questions as:
- Which foods disappeared completely?
- What must happen to the foods that did not dissolve before the body can use them?
- Are there some foods that are not changed by digestive juices?

3.32 (See Beginning Level.)

Advanced Level

are lost when burned, and then replaced by new molecules which are oxidized to carbon and water.)
- How is this like a living cell? (A living cell oxidizes materials with the production of energy.)
- How is it different? (The cell is constantly supplied with raw materials, whereas the candle burns itself out shortly. A living cell may continue to exist for a long time because it can replenish its materials.)

3.31 Students read references to find out the chemical changes that occur before food is absorbed into the blood stream.

Students complete chart such as:

Gland	Juices Secreted	Foodstuff Acted Upon
Salivary glands	Saliva	Starches

* Students trace the path of a bacon, lettuce and tomato sandwich from the time it is eaten until absorbed into the blood stream.

3.32 Students compute the basal metabolism rate (BMR) for a male weighing 150 pounds, using the following information: 1 calorie per hour required for each 2.2 pounds of body weight (24 x [150 ÷ 2.2] = 1,632)

Students compute the same for a 130 pound female, deducting 10% of calorie requirement per hour per pound.

Students then compute their own BMR's.

Topical Outline

3.0 Factors Affecting Food Selection
        3.32 Basal Metabolic Rate (Continued)
        3.33 Weight Control
    3.4 Evaluation of Nutritional Status

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
3.33 Achieving and maintaining recommended body weight is a concern of many individuals.	3.33 **Beginning and Intermediate Level** *Knowledge:* Selects foods according to calorie content in order to maintain optimal body weight. **Advanced Level** *Analysis:* Diagrams the basic principles of digestion in order to understand the use of food in the body.	3.33 Students review section from *Mr. Peanut's Guide to Nutrition* on calories and weight control. From a tray of food items, students guess which of each pair of foods has the most calories (cookie versus celery, French fries versus apple). Students then list some characteristics of high and low calorie foods as: **High**: – thick, oily, greasy, crisp – slick, sweet or gooey – compact or concentrated – sweet or sticky – alcoholic **Low** – thin, watery or dilute – bulky–lots of fiber – watery, crisp (Deutsch, Ronald Mr., *The Family Guide to Better Health*, p. 143.) Students read references to find the meaning of a "calorie" and how it relates to body weight.
3.4 When an evaluation of a population's nutritional status is made, the information received may be used to analyze and improve an individual's nutritional status.	3.4 **Advanced Level** *Application:* Collects information on nutritional research studies and applies findings to own diet.	3.4 Learning experiences are not appropriate for this conceptual statement at this level.

BEST COPY AVAILABLE

LEARNING EXPERIENCES

Intermediate Level

3.33 Students read and discuss booklet, *A Girl and Her Figure*, by Ruth M. Leverton.
(or)
Students use Comparison Cards from Dairy Council to identify high and low calorie foods.

Students make posters showing amounts of different foods which equal 100 calories. Make equal (=) sign between posters and line up around the room to display.

Students then develop a poster strip illustrating figures walking, sitting, cycling, sleeping, etc. Each figure is labeled with the number of minutes of that activity needed to use up 100 calories.

Students analyze reducing diets found in magazines or going around school for nutritional adequacy. Students discuss the popularity of fad diets and why they fail or a person regains the weight immediately.

3.4 (See Advanced Level.)

Advanced Level

Students read references to obtain answers to the following:
– How is basal metabolism measured in lab or clinic?
– What variables influence the BMR:
– Does it change during a lifetime? When?

* Given the weight and sex of an individual, the student will compute his basal metabolism rate.

3.33 Students analyze popular or fad diets referring to *The Family Guide to Better Food* and *Better Health*.

Students hear speaker from a weight control organization such as Weight Watchers.

* Students analyze their recommended diets for nutritional adequacy.

3.4 Students hear speaker from Arizona Department of Health describe current nutritional status surveys and their findings.
(or)
Students locate and report to class information on nutritional surveys described in journals.

Topical Outline

3.0 Factors Affecting Food Selection
  3.4 Evaluation of Nutritional Status (Continued)
    3.41 Factors Which Influence Nutritional Status
    3.42 Methods Used to Measure Nutritional Status

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
3.41 An individual's nutritional status is determined by the interaction of his nutrient intake with heredity, environment, physical activity, and the body's utilization of nutrients.	3.41 **Intermediate and Advanced Levels** *Analysis:* Draws conclusions about the effect of various factors on one's nutritional status.	3.41 Learning experiences are not appropriate for this conceptual statement at this level.
3.42 Several types of measurement can be used to assess nutritional status. – **A general clinical examination** by a physician will uncover overt signs of nutrient deficiencies. – One indication of adequate nutrition in children is **growth process**, measured by change in height and weight, head circumference, skeleton dimensions, skinfold thickness. – Biochemical measurements of nutrient **levels in urine** and/or blood give information about nutritional status. – **Dietary survey** (by asking the subject to recall what he has eaten or to keep a record, or by observation) serves as an indicator of nutrient adequacy.	3.42 **Advanced Level** *Comprehension:* Describes four types of measurement used to measure nutritional status.	3.42 Learning experiences are not appropriate for this conceptual statement at this level.

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
	Students discuss implications research findings have for them personally. Example: High incidence of anemia in Arizona, may need to eat more iron-rich foods.
3.41 Students interview teenagers from 13 to 15 and 16 to 18 for food preferences or food intake. Students analyze to see if there is any difference between the two groups. Students give reasons why these differences might occur.	3.41 Students divide into committee groups to analyze family situations according to: family size, age, description of individuals, activity, meal patterns and eating habits. Students draw conclusions about the effect of age, income, activity, ethnic and cultural patterns on diet.
3.42 Learning experiences are not appropriate for this conceptual statement at this level.	3.42 Students suggest ways of telling if a person was adequately nourished. Students read resources to find ways of assessing nutritional status. Students discuss four types of measurement that can be used. Students view a demonstration by a physician, nurse, or dietitian of ways to measure nutritional status.

Topical Outline
3.0 Factors Affecting Food Selection
  3.5 Individual Variations for Nutrients and Calorie Needs
    3.51 Pregnancy and Lactation
      – Normal Pregnancy
      – Teenage Pregnancy

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
		Beginning Level
3.5 When an individual, from conception, consumes the necessary nutrients to grow and develop to his full status, and continues to eat sufficient nutrients to maintain optimum health throughout adulthood, he will be more likely to enjoy reasonable health and stamina throughout life and in old age. Nutrients needed for all individuals are influenced by age, sex, size, activity, specific conditions of growth and state of health. Nutritional needs vary throughout the life cycle as the progress of growth and development changes.	3.5 **Beginning Level** *Application:* Compares the individual's need for essential nutrients throughout life. **Intermediate Level** *Analysis:* Examines R.D.A. and applies it to various age groups within a family. **Advanced Level** *Analysis:* Interprets case studies showing how needs of family members differ according to health, age, and other factors.	3.5 Students view pictures of babies, teenagers, aged persons, invalids, football players. Students read references to answer questions as: – How do the nutrient needs of each of these people vary? – Which is growing rapidly? – Who burns up the most energy? – Who would need less calories? – What are special needs each might have? Students will examine the R.D.A. (recommended daily allowances) charts and note the requirements for an active 16-year-old boy, 16-year-old sedentary girl, 65-year-old grandmother, and a 3-month-old baby. * Given a sample daily menu, students check it for adequacy of each individual above and make corrections as needed. (or) Students are asked to tell about their families and what they eat. Do they all eat similar or the same foods? Do they eat equal amounts? Does illness of family members change their meal pattern? Are there babies or elderly people in the family and how does this change the use of raw foods in the menu?
3.51 Diet years before, during, and after pregnancy is a strong determining factor in the health status of the woman, the fetus, and the new-born child. – Careful selection of food during pregnancy is	3.51 **Beginning Level** *Comprehension:* Summarizes the nutritional needs of teenage girls for adequate body structure.	3.51 Teacher uses a chart of body structure to illustrate the following points: – development of egg begins many years before pregnancy. – chromsomes are affected by the Mother's diet. – bone structure of the mother is determined early in her life.

LEARNING EXPERIENCES

Intermediate Level

3.5 Students use the chart of "Recommended Dietary Allowances" from the National Research Council and compare allowances for the following:
- age groups–infancy, 3 to 12 years, adolescents, periods of adulthood, elderly
- degree of activity–sedentary to high activity
- sex
- expectant and lactating women

In small groups, the students modify a menu for individuals of varying ages, sex and activity level.

* Students will use food models to plan meals for a specified individual as:
- athlete, age 17, male
- sedentary girl, age 15
- elderly woman, moderately active
- baby, 6 months old

Students ask other teachers to list foods they had eaten during the past 24 hours and then evaluate these in terms of meeting R.D.A. in relation to individual needs.

3.51 Students hear talk by a resource person on adequate diet before, during and after pregnancy. Resource person may be:
- school nurse, Red Cross nurse
- county health official
- doctor (preferably an obstetrician)

Advanced Level

3.5 Students read a case study of a person with an illness being cared for in his home, including a prescribed diet, information about other family members, and socioeconomic data. Student will tell or write how the prescribed diet for the ill person could be assured and the effect on others in the family.

* Students correct a falsified story (interlinear device) with family members of varying ages, sizes, and levels of activity.

* Students are given the following situation for which to find solutions for providing adequate diets.

1 The family is composed of Mary Jane, three years old; Dan, fourteen; mother who is pregnant; father with an ulcer probelm; grandma and grandpa who are in their seventies.

2 The family is composed of twenty-two-year-old Jane who is single, Bob and Billy who are her sixteen-year-old twin brothers, and a housekeeper.

3 The family is composed of Martha, divorced, with two children eight and ten. Martha has two jobs to maintain her family and finds little time and little money to handle the situation. Her teenage babysitter is not very reliable either.

Students share solutions noting variations in nutrients needed, kinds of food selected, influence of time and money on food choices.

3.51 Students observe a role playing situation in which a doctor and pregnant woman discuss questions as:
- Should a pregnant woman really "eat for two"?
- How important is diet during pregnancy?
- Why is calcium essential to the baby's development?

Topical Outline
3.0 Factors Affecting Food Selection
3.51 Pregnancy and Lactation (Continued)
3.52 Childhood

BEST COPY AVAILABLE

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
necessary to meet the increased need for nutrients without gaining unnecessary weight. – The fetus depends on mother's diet to provide building materials for its growth and for stores of nutrients. – The risk of prematurity is less when mother is in good health including good nutrition. – The nutrient requirements of the teenage mother are greater than for adult pregnancy because of needs for her growth as well as that of the fetus.	**Intermediate and Advanced Levels** *Application:* Be able to select an adequate diet for a pregnant and a lactating woman from several examples.	**Beginning Level** * Students summarize by listing nutrients necessary for pre-fetal development. Students calculate the foods eaten by a teenager who was pregnant to determine if they meet these needs. Students then show how her eating habits would have to be changed to provide for her own growth as well as the fetus.
3.52 Throughout childhood growth occurs in spurts with a period of rapid increase in skeletal height followed by a more rapid increase weight. – The total nutritional need increases with age, but the	3.52 **Beginning Level** *Comprehension:* Describes the growth patterns during childhood (1–10 years) which influence the nutritional needs of childhood.	3.52 Students will examine growth charts of several children (may be obtained from school nurse or their own growth chart). Students will note alternating increases in weight and height. Students read reference as *Teen Guide to Homemaking*, pp. 133-134, for additional

LEARNING EXPERIENCES

Intermediate Level

Students read National Dairy Council pamphlet *What to Eat* or students view film or filmstrip from county health department. Students view filmstrip *More Than Love* available through March of Dimes or Arizona Association, FHA. Students explain role adequate diet plays in the health of mother and baby.

* Students will describe the nutritional needs of a teenage mother in relation to an adult mother. Students will explain reasons for the increased needs of the teenage mother.

* Students in small groups, prepare displays concerning diet during pregnancy. Local health clinics and/or doctors might be contacted for use of the displays in their clinics. Students hear pregnant mother and lactating mother tell about their diets. Students ask questions relative to topic. Students use R.D.A. charts to compare nutrient needs of pregnant, lactating and non-pregnant women.

* Students develop a day's menus for a pregnant and a lactating woman.

3.52 Students view filmstrip *Feeding Your Young Children* and read booklet *Food Before Six* (both from National Dairy Council). (See bibliography for other references.) Students respond to questions as:

- What are the food needs of children?
- How is their growth influenced by these food needs?
- How do children respond to various foods?

Advanced Level

- What if the protein intake is low?
- How many calories a day does a pregnant woman need?
- What will be the effect of a low intake of iron, iodine?
- What about taking vitamin pills?

Students compare Recommended Daily Allowances for young adult women and for pregnant and lactating women to note increase in nutrients recommended.

Students explain why it is important for a pregnant woman to use the Basic Four Daily Food Guide and the advice of her physician in planning diet.

Students in groups alter menus for a day provided by the teacher to increase protein, calcium, iron, and Vitamins C and D to meet requirements for a pregnant woman without increasing total caloric intake.

* Each student summarizes major ideas about providing adequately for nutrition in periods of pregnancy and lactation.

Students investigate the advantages and disadvantages of breast and bottle feeding; or a doctor or nurse or representative of the Le Leche League could present information to the class.

* Students write a paragraph summarizing the advantages for both mother and infant.

3.52 Students view filmstrip, *ABC's of Baby Feeding*, H. J. Heinz Co., students read references as Hurlock, pp. 79-102; Brisbane and Riker, pp. 101-113; Cronan and Atwood, pp. 273–278; White, pp. 338-342 for background on infant feeding.
Students respond to questions as:

- Why is it important to feed an infant in a pleasant, relaxed situation?

Topical Outline

3.0 Factors Affecting Food Selection
    3.52 Childhood (Continued)
    3.53 Teenagers

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
nutritional requirement on the basis of weight decreases. – Food habits providing satisfying relationships in early feeding experiences aid in developing healthy attitudes toward food and emotional health.	**Intermediate Level** *Synthesis:* Plans menus appropriate for small children. **Advanced Level** *Evaluation:* Judges menus for children for nutritional adequacy and appeal.	information about children's nutrition. Students interview 2–6 year old children on their food likes and dislikes and why they feel that way. In class discussion students suggest what may be the basic reasons for these likes and dislikes and how they affect eating patterns and nutrition. * Students describe the foods they would serve at a holiday party for children considering nutritional needs and children's food preferences. (Students might prepare such a party for a day care center, children's home, etc. Include games and student-made gifts if desired.) Students survey supermarket and list kinds of baby food for sale and their cost. Students consider advantages and disadvantages of baby foods over regular foods mashed. * Students comment on statement, "a sign of a healthy baby is a fat baby," and explain the effect this belief may have on nutritional status later in life.
3.53 Because of difference in body growth, onset of maturation, and amount of activity, specific nutritional needs of adolescents will vary.	3.53 **Beginning Level** *Comprehension:* Explains factors affecting nutritional needs and the consequences of deficient diets of youth.	3.53 Students read booklets, *They Ask Why* or *Your Food: Chance or Choice*, National Dairy Council. Students bring in pictures of themselves at various times from birth to present. Students respond to questions as:

LEARNING EXPERIENCES

Intermediate Level

Student draws the name of a food from a box, and tells or shows his reaction at various ages as: baby, 6 years old, 15 years old, 30 years old, 75 years old. Students discuss how food choices are affected by experiences and concerns.

* Students will plan menus for one day for a child from 2–10 years old. Students choose one meal and prepare it.

3.53 Students role play an adult criticizing teenagers for what they eat or students interview parents as to specifically what they think is wrong with some teenagers' eating habits.
Students list possible reasons for criticisms as:
- influences of peer group likes and dislikes

Advanced Level

- What are some advantages of breast feeding and of formula feeding?
- What age are semi-solids added to the diet and how should they be introduced?
- How will you know when baby is ready to feed himself?
- How is the food for an infant related to his pattern and rate of growth?

Students recall from filmstrip and reading ideas about the relation of a child's early feeding experiences to his attitudes toward food and his general emotional health later in life; speculate as to why this relationship exists. Students develop and role play a situation involving food management in which the roles of husband and wife are changing with the addition of a child to the family group to include the parent role. Students will record the average height and food intake at yearly intervals on a line graph, demonstrating how food needs decreased in proportion to size.

* Students present skits showing effect of feeding habits on emotional development such as:
- Teaching a child to overeat by insisting on his finishing (the clean plate theory).
- Punishment for poor table manners.
- Attractive foods, small pieces, small servings of food.

* Students plan a typical family dinner menu, and vary it to meet the needs of a two-year-old child, considering likes and dislikes of small children as well as nutritional needs. Students exchange menus and judge for nutritional content and appeal for children.

3.53 Students take an incomplete sentence quiz on nutritional needs of youth, looking up answers in pamphlets or reference books. Students bring in advertisements, package labels or information from TV ads which refer to nutritional content of a product. Students use R.D.A. charts to list their needs for various

Topical Outline
3.0 Factors Affecting Food Selection
3.53 Teenagers (Continued)
3.54 Adults

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
When adolescent diets over an extended period of time are deficient in essential nutrients, an interplay of physical, mental and social problems may be precipitated.	**Intermediate Level** *Analysis:* Examines factors influencing nutritional needs of youth and determines the possible effects of diet on youth. **Advanced Level** *Evaluation:* Assesses the nutritional adequacy of advertised and/or special diets.	**Beginning Level** – What caused the changes in size? – How does food influence growth? – What can a person do now to be a healthy person when a young adult? – How does a person's eating habits now affect them as an elderly person? – Do all teenagers need the same amount of nutrients? – Why are there variations? – What are some signs that a young person may have an inadequate diet? Students draw pictures or make collages showing results of inadequate diet. Students examine a diet, for a boy trying out for the wrestling team, which was recommended by his coach. The boy does not like the food on the diet. Students consider what foods might be substituted and review the nutritional adequacy of the diet. * Students note what, if any, changes are needed in diets for athletes.
3.54 In adult years, the need for most nutrients continues essentially the same as during the growth period except that the caloric intake needs to be reduced because of lower basal metabolism and less physical activity. During later years of life, the number of health problems associated with dietary practices increases because of significant changes of living.	3.54 **All Levels** *Comprehension:* Given the age group of an individual, the student will describe his nutrient needs and reasons for changes occuring in those needs.	3.54 Students interview elderly person and have him recall food intake for the last 24 hours. Student responds to these statements concerning this person: – total caloric intake – activities – age – health problems – nutrients included – nutrients missing Student summarizes by stating how he could help this person eat to meet these nutritional needs.

LEARNING EXPERIENCES

Intermediate Level

- nutritionally harmful
- inconvenience to others
- sign of rebellion and/or independence
- just different from adults way

Students consider reason why nutrition is important during teen years as:

- high needs due to rapid growth
- good health required to meet demands of school and social life
- habits formed now may last a lifetime
- their health may affect their children later

* Students respond to questions:

- What does an adequate day's diet for a teenager include?
- How is a diet for a teenager different from a child's?
- From an adult? (use Recommended Daily Allowance Charts)

Students review recent studies of teenage nutrition and report major findings. (See references)

3.54 Students role play family members of various ages as:

male, 33 years, construction worker
female, 30 years, office worker
female, 48 years, housewife, overweight
male, 72 years, retired but avid golfer

Students consider nutritional needs of each in relation to calories, protein, iron, vitamins. (Use R.D.A. Charts)

* Students select cards from a stack (girls and boys separated) describing a person at some time in the future. Example: Female 25 years old, pregnant; male, former athlete, junior engineer, taking night classes; female, 75, retired, semi-invalid. Students state which nutrients would be increased or decreased in each case.

Advanced Level

nutrients, and then evaluate amount of nutrition provided by the product according to the ad or label.

* Students request that a football player or other athlete do a 24-hour recall of foods eaten. Students compare with another student of same age, size, and sex but not an athlete. Note differences in calorie intake and consumption of other nutrients by computing basal metabolism and caloric needs.

3.54 Students view pictures of a person who gradually increases in weight as he gets older, then answer open-end questions to emphasize need for reduction in caloric intake with age. Students cite examples of how one can increase exercise in daily routines such as: more walking, standing, climbing stairs. Students are divided into groups of 3-4. Students are given a list of some factors in old age that affect eating patterns as: loneliness, disability, loss of (or lessened) taste, smell, lack of money, worry, loss of teeth, poor eating habits. Students discuss how these factors might negatively affect the nutritional well-being of the elderly. Students make suggestions to help these problems.

* Each student draws a card about an imaginary person giving the

Topical Outline
3.0 Factors Affecting Food Selection
    3.54 Adults (Continued)
  3.6 Nutrition as Related to Abnormal Conditions
    3.61 Research Correlation Nutrition to Disease
    3.62 Infection
    3.63 Dental Health

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
3.6 Abnormal conditions of health, habits or environment require special consideration in nutrition and food selection.	3.6 **Advanced Level** *Evaluation:* Gives examples of considerations of abnormal conditions of health, habits or environment.	3.6 Learning experiences are not appropriate for this conceptual statement at this level.
3.61 The role of nutrition in specific aspects of health and disease involves the efforts of scientists and professionals as they strive to find the correlation between nutrition and disease.	3.61 **Advanced Level** *Comprehension:* Becomes aware of efforts of scientists and paraprofessionals in the nutritional field.	3.61 Learning experiences are not appropriate for this conceptual statement at this level.
3.62 During an infection, loss of appetite and fever which increases metabolism and sweating may cause a loss of nutrients; nitrogen may be lost in urine; blood levels of Vitamin A may be reduced, and anemia may occur through interference with red cell production.	3.62 **Beginning Level** *Comprehension:* Describes nutrients that may be lost during an infection accompanied by fever. **Intermediate Level** *Application:* Plans and prepares a meal for an individual with an infection.	3.62 Students recall how they felt when they had a fever or serious infection – Did they feel like eating? – What were some of the other symptons had besides fever? Teacher explains other effects a fever may have on nutrients. * Students cite reasons why an adequate diet is important when one has infection.
3.63 If there is prompt dental care during primary teeth stage, use of flourides, and minimal use of sweets and fermentable	3.63 **Beginning and Intermediate Levels** *Comprehension:* Explains measures which can be utilized to reduce dental health problems.	3.63 Students recall the nutrients needed in formation of teeth–calcium, phosphorus, Vitamin D, and the foods which supply these nutrients. Students suggest the effect on teeth from a lack of these nutrients.

Intermediate Level	Advanced Level
	age, sex, size, activity, occupation and other characteristics of the person. Students plan a day's menu for the person considering all factors, including when and where the meal would be eaten. Students present meals to the class and discuss suitability of each meal for the person.
3.6 Learning experiences are not appropriate for this conceptual statement at this level.	3.6 Student committees select one of the following areas of interest to research: vitamin excesses, allergies, circulatiory diseases, infection, diabetes, dental health, drugs. Committees make presentations of their findings to class. Presentations may utilize questionnaires, surveys, skits, puppet shows, interviews, guest speakers.
3.61 Learning experiences are not appropriate for this conceptual statement at this level.	3.61 Students hear doctor, technology specialist, biology or health teacher speak on latest findings in the area of health problems relative to their geographic or cultural area. Students read and report on an article from a current magazine, such as *Ladies Home Journal*, *Good Housekeeping*, *Readers Digest*, *Time*, etc, discussing recent developments in the nutritional-medical field.
3.62 Students plan and prepare a tray meal that would be attractive and taste good for a person with a fever and little appetite. (The foods should include high caloric liquids to replace fluids lost and soft, simple foods that would be easy to digest.)	3.62 (See Intermediate Level Experience.)
3.63 Students brainstorm for snacks that could contribute to the day's nutrition and would work as a detergent to clean the teeth. (Celery provides vitamins and minerals and the fibers act as a tooth brush to scrape and scrub the teeth clean.)	3.63 Through reading references or hearing an illustrated lecture, the students respond to the following questions: – At what stage of fetal development are teeth formed? – What nutrients are needed in their formation?

Topical Outline

3.0 Factors Affecting Food Selection
- 3.63 Dental Health (Continued)
- 3.64 Alcoholism
- 3.65 Drug Use and/or Addiction

3.7 Environmental Influences on Nutritional Health

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
carbohydrates, dental health problems can be temporary or of short duration.	**Advanced Level** *Analysis:* Makes conclusions relative to the effect of nutrients on the development of teeth.	Students explain how food can help reduce dental cavities.
3.64 When an individual is addicted to alcohol, poor nutrition may occur because alcohol, which provides calories but few nutrients, is substituted for food.	3.64 **Intermediate and Advanced Levels** *Comprehension:* Explains why malnutrition occurs with alcoholism.	3.64 Learning experiences are not appropriate for this conceptual statement at this level.
3.65 Research reports that drug addicts have diets low in calories and protein but high in carbohydrates which leads to clinical malnutrition with serious vitamin and protein deficiences because of their low intake of vegetables, milk and eggs."	3.65 **Intermediate and Advanced Levels** *Comprehension:* Reviews research reports on the effect of drug addiction on nutrition.	3.65 Learning experiences are not appropriate for this conceptual statement at this level.
3.7 Environmental factors affect nutritional health by influencing the kinds, quality and quantity of food available; the social-culture practices related to foods; and the psychological response to food.	3.7 **Beginning Level** *Comprehension:* Illustrates the effect environmental factors have on nutritional health. **Intermediate Level** *Application:* Applies information about environmental factors to its effect on nutritional health.	3.7 Students describe food items that they or their families have eaten recently which are new to them. Students cite reasons why these items were tried–coupon, special price, advertising, friend or relative describing it, etc. Students who have moved from another region tell about foods which were new to them. * Students describe factors that may cause a person to change the foods they normally eat.

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
	– What is the source of supply for the nutrients? – At what age are dental caries most prevalent? – What preventive measures can be used?
	* Students develop generalizations relative to the effect of nutrients on dental development and health.
3.64 (See Advanced Level.)	3.64 Students consult nutrient charts to find out the number of calories, and the amount of various nutrients in alcoholic beverages. Students list the nutrients one would be lacking if he was not consuming any other foods.
	* Students write a brief paragraph explaining why the alcoholic may suffer from malnutrition.
3.65 Students hear speaker from Drug Education agency or similar group discuss role of drug addiction in malnutrition. Speaker might indicate types of food emphasized in rehabilitative programs.	3.65 Students research current literature in journals and magazines for information relative to the effect of drug addiction on nutrition. Students share their findings in reports to class.
3.7 Students discuss the influence of life styles and various environmental factors on food decisions and nutritional behavior using questions as: – What influences the foods you choose–taste, health needs, energy need? – Does society's expectations in terms of weight, figure, complexion affect your food choices? – Does religion have any affect? – What influences the way you eat (manners)? – Do other people of your age have any influence on what you eat?	3.7 Students list 20 food items arranging them in groups of four on a scale divided into: 1) really like, 2) like, 3) okay, 4) dislike, and 5) really dislike.
	* Students analyze their personal food lists for the factors that may be influencing their food choices. Students alter one factor and analyze how that would affect their choices.

Topical Outline

3.0 Factors Affecting Food Selection
    3.7 Environmental Influences on Nutritional Health
        3.71 – 3.711 Psychological Influences
        3.712 Communication
        3.713 Socializing Influence

BEST COPY AVAILABLE

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
	Advanced Level *Analysis:* Analyzes the effect of a change in the environment on food availability.	**Beginning Level**
3.71 Psychological and emotional influences may predispose an individual to varied eating patterns. 3.711 An individual may express emotions through giving, accepting or rejecting food, showing food preferences, and eating excessively large or small amounts of food.	3.71–3.711 **Beginning Level** *Comprehension:* Cites several examples of food choices influenced by psychological and emotional factors. **Intermediate and Advanced Levels** *Synthesis:* Presents in a dramatic way the effect of psychological states on eating patterns.	3.71–3.711 Students role play emotional states as: anger, fear, boredom, grief, pleasure, etc. Students give an example of how each state might affect one's food choices and could be expressed through food.
3.712 When food is used as a symbol of hospitality and friendliness, communication barriers may be broken down.	3.712 **All Levels** *Comprehension:* Describes the use of food to help remove communication barriers.	3.712 Students are served food at beginning of class without explanation as to reason. Students discuss questions as: – What effect did the food have on your feelings? – On your attitudes toward class? – Did it make you more relaxed?
3.713 The socializing process is often accompanied by the serving of food. – In some cultures it would be considered an insult not to offer food to a guest. – Social functions often revolve around food and some are identified as such–birthdays, weddings, funerals, reunions.	3.713 **Beginning Level** *Comprehension:* Describes an enjoyable situation and the food available. **Intermediate Level** *Comprehension:* Explains the effect of social groups on eating patterns.	3.713 Students list the various groups with whom they have eaten during the past week–parents, friends, siblings, organizations, picnics, camps, etc. Describe each group and/or occasion and the food eaten. * Students describe each situation as: – Were there certain foods eaten with each group or occasion? – Were any places or groups sought out specifically for the food? – Were the foods used to achieve other goals?

LEARNING EXPERIENCES

Intermediate Level

- Are there any foods you eat which are traditional in your family?
- Does the part of the country and whether you live in a rural or urban area have any affect? How?

3.71–3.711
Students dramatize through skits, role playing with puppets, situations in which emotions influence nutritional behavior. Students role play situations which illustrate the use of food as reward or punishment.

3.712 Students list on board various social situations in which food serves social needs rather than nutritional needs as coffee breaks, teas, etc. Students consider what social needs these situations serve–friendliness, relax, get acquainted.

3.713 Students make a collection of pictures showing people eating in a variety of situations and occasions. Students examine the pictures and decide if food is being used for only nutritional purposes or if social needs are also being served.

* Students write a statement explaining the effect of social groups on eating patterns.

Students divide into two groups and one group entertains the other with simple refreshments.

Advanced Level

3.71–3.711
Students brainstorm for sayings relative to food as, "The way to a man's heart is through his stomach." Students discuss the implications of these sayings. Students enact TV commercials or food advertisements where food is used to express emotions.

3.712 Students brainstorm about situations in which food contributes to mutual understanding. After observing pictures illustrating social uses of food, students in small groups write a paragraph about one picture.

3.713 Students, through role play, show various situations where food is part of friendliness, hospitality and/or celebrations of various kinds. Students plan, prepare and serve tea, reception, party or buffet for a group of parents, students or teachers. Following the event, students will analyze the social interaction they observed–people who became acquainted, how they seem to feel towards each other, the role of food in getting people acquainted, promoting conversation.

Topical Outline
3.0 Factors Affecting Food Selection
3.713 Socializing Influence (Continued)
– Party Foods
3.714 Food Preferences
3.715 Sensory Enjoyment

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
	Advanced Level *Analysis:* Analyzes the effect of food in social situations.	**Beginning Level**
– Party foods provide an opportunity to be creative. Consideration may be given to number and ages of individuals, occasion, and budget.	– **Beginning Level** *Application;* Constructs a menu for a party for a specified purpose.	– Students plan party menu to be served to friends. Emphasis is placed upon nutritious desserts rather than empty calorie choices. Students may consider the following in planning: – cost – purpose of party – invitation and decorations – simple menu
3.714 Preferences for flavor, aroma, color, size and shape, texture, and temperature are learned.	3.714 **Beginning Level** *Comprehension:* Explains the sources of food preferences. **Intermediate Level** *Analysis:* Analyzes reasons for food preferences. **Advanced Level** *Synthesis:* Draw written conclusions relative to food preferences.	3.714 Students sample foods to assess preferences. (Food might be anchovies, poi, mashed potatoes, eggplant, avocado.) Class discusses reason for individual preferences.
3.715 When the characteristics of foods including color, flavor, texture and aroma are considered, foods may be planned which have a great deal of sensory appeal to the individual.	3.715 **Beginning Level** *Comprehension:* Describes means of creating sensory appeal in foods. **Intermediate and Advanced Levels** *Application:* Applies knowledge of sensory appeal to total meal planning.	3.715 Students taste some common foods while blindfolded and with nostrils closed and tell what food they think they tasted. Students summarize the effect of senses of sight and smell on taste. Teacher prepares three samples–one orange jello, and two unflavored gelatin with orange food coloring added. Students taste samples and discuss influence of color on taste of food.

LEARNING EXPERIENCES

Intermediate Level

* Students discuss afterwards how they felt toward the others; if they got to know anyone better.

– (See Beginning Level.)

3.714 Teacher calls out name of several foods and students indicate their feeling toward each as: greatly like, moderately like, have no feelings about this food, eat but don't care for, strongly dislike. Students analyze reasons for their feelings about each food.

Students taste unfamiliar foods and score according to the categories listed above.

3.715 Students list a particular food that comes to mind when a characteristic of food is named as: sour, salty, chewy, cold, leafy, soft, sweet, smooth, chrunchy, hot, sticky, green.

Students are blindfolded and have them identify food suggested by aroma (extracts, spices).

Four students carefully place food on a plate and arrange it attractively. On another plate students "throw the food on

Advanced Level

– (See Beginning Level.)

3.714 Class members interview other students and obtain information relative to food preferences by asking students to indicate food they like, dislike and feel indifferent toward. Students compile data into three lists–foods liked by all students, foods disliked by all students, foods which some students like and some dislike. Students give reasons for disliking certain foods and tabulate results.

* Students draw conclusions relative to food preferences.

3.715 Students plan meals for the following to include variety in texture, color, flavor and aroma:
- children's meal
- family meal
- a meal for the elderly

Topical Outline

3.0 Factors Affecting Food Selection

3.715 Sensory Enjoyment (Continued)

3.72 Cultural Influence

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
	Awareness: Accepts the concept of sensory appeal in food.	**Beginning Level** Teacher prepares two trays for students to observe and evaluate. One tray has foods mostly white in color, bland in flavor and soft in texture. The other has variety in color, flavor and texture. Class discusses why one tray is more appealing than the other. * Students change sample menus to make them more appealing in color, flavor and texture.
3.72 Foods and the manner in which they are eaten are influenced by a complex system of attitudes, traditions, regional, religious and social customs.	3.72 **Beginning Level** *Comprehension:* Summarizes the differences and similarities in eating patterns between his culture and those of other cultures. **Intermediate Level** *Application:* Collects information about food customs of other cultures. **Advanced Level** *Analysis:* Differentiates between food customs in his culture and those of another culture.	3.72 Students compile a list of items which might be potential food but are not thought of as food in this country (example–insects, snake, dog meat). Then list foods which are eaten here but not in certain other parts of the world (example–beef is not eaten by Hindus). Students describe their own eating patterns as: – number of meals eaten per day – kinds and amounts of food – time of day They compare their personal pattern with that of their family. Students then read references or view films or filmstrips of eating patterns of people of other regions, countries, ethnic or cultural groups. * Students summarize the differences and similarities between their patterns and those of other cultures.

LEARNING EXPERIENCES

Intermediate Level

any old way." Students vote on the plate they would select first. Students compare pictures of plates of food of all the same color and another with a variety of color.

* Students decide which plate is more appealing.

* Students develop a menu by placing pictures of various foods together on flannel or bulletin board.
- Analyze which combinations are pleasing and which need some variations in color, texture and flavor.
- Which meals would appeal to individual families or students?
- Why would some meals not appeal?

3.72 Students view filmstrips or movies that illustrate food habits and customs in several countries. Class is divided into several small groups and each selects a country for further investigation. Students present an illustrated report or talk on the country. In their report the following questions should be answered:
- Where is the country located?
- What is the environment?
- What foods are grown?
- Which foods are eaten?
- What are the physical characteristics of many of the people?
- Do people of all ages seem to eat the same foods, follow same eating habits?
- Why do differences exist between groups in food eaten?
- What time(s) of day are meals served?
- What type of meal is served at a particular time?
- What is the order of family members served?

Advanced Level

3.72 A foreign student is invited to talk to the class about foods eaten in his native country. Perhaps actual samples of some of the foods might be shown. Students imagine they are going to live in a different part of the world. Each student finds out what the differences would be in terms of eating habits by researching newspaper articles, references or talking with individuals from chosen area. Students share results of research in class.

* Given a list of foods, grouped with three or four kinds together, the student will distinguish the food that is out of place for a particular country, i.e., the food is unavailable or not eaten there.

Topical Outline

3.0 Factors Affecting Food Selection
- 3.721 Ethnic Background
- 3.722 Religious Heritage
- 3.723 Holiday Foods

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
3.721 A person's decision to eat certain foods may be the result of beliefs and habits based on ecological conditions which become deeply rooted in his ethnic or cultural background.	3.721 **Beginning Level** *Comprehension:* Identifies foods eaten by particular ethnic groups in U.S. **Intermediate Level** *Application:* Organizes a menu for at least one foreign country. **Advanced Level** *Analysis:* Analyzes preparation methods, nutrients, and cost of various ethnic foods.	3.721 Students list all the foods eaten in the United States which were also eaten by the Indians before the Europeans arrived. Students then list some foods which were brought here from other countries. Students discuss: Do all Americans eat about the same foods? Why not? What differences exist? Are there any foods eaten by most Americans? Students explore the foods eaten in certain regions of the U.S. If laboratory facilities are available, students in groups prepare a special ethnic food. * The student will identify foods he eats which are either ethnic or regional in nature.
3.722 Religious heritage provides the opportunity for man to express and reaffirm his beliefs through observance of dietary rituals.	3.722 **Beginning Level** *Comprehension:* Describes ways in which dietary rituals are a part of religious heritage. **Intermediate Level** *Application:* Uses information about special religious dietary practices when planning meals for individuals and groups. **Advanced Level** *Synthesis:* Plans menus with modifications for religious dietary rituals.	3.722 Students examine a display of a variety of foods related to special religious observances such as Easter eggs, unleavened bread, etc. Students read references or talk with individuals to learn the significance of the foods. * Students describe other ways that dietary habits can be influenced by religion.
3.723 When holiday events are being observed, factors to consider in menu planning may include the holiday, the number and ages of	3.723 **Beginning Level** *Comprehension:* Identifies holiday foods which are traditional in some homes.	3.723 Students discuss food customs in their family for several holidays such as Thanksgiving, New Year's, Christmas, etc.

LEARNING EXPERIENCES

Intermediate Level

3.721 Parents of students may be invited to demonstrate or help demonstrate ethnic foods and/or family specialties. Students may demonstrate ethnic foods with which they are familiar or bring samples of ethnic foods prepared at home. Students select a meal that is a family favorite, especially those that have an ethnic or cultural derivation. Students bring recipes for menu items to be put into a "Family Favorite" cookbook to be compiled, printed, and distributed to class members. Students prepare a buffet luncheon featuring a variety of ethnic or culturally related foods.

* Each student is assigned a region of the U.S. or a foreign country. Student selects the items he would sell if he opened a food store there.

3.722 Students, in small groups or individuals, select a religion and report on how it uses food in its rituals or how its rules affect the food intake of its adherents. Students collect prayers of giving thanks for food from various religions and make a display or series of posters from them.

* Students will apply information about special religious dietary rituals in making menu plans for individuals and groups.

3.723 In cooperation with Spanish, German, or other foreign language class, students plan, prepare, and serve a holiday meal typical of a country where that language is spoken. Typical

Advanced Level

3.721 Students try to look at American eating customs as if "looking through the eyes of a foreigner" and identify some rather unique customs: TV dinners, drive-ins, snacks. Through the use of a local telephone directory students list all the restaurants in the area featuring foods of a particular cultural or ethnic group. In teams of two, students are assigned to visit one of the restaurants, collect a menu, and discuss with manager or chef the special characteristics of the foods.

* Students then analyze foods for essential nutrients, cost, preparation techniques, how it is eaten in area of origin. Students might plan a dinner at a foreign foods restaurant chosen by majority of class.

3.722 Invite a panel of speakers to talk to the class about the significance of various religious customs pertaining to food, its preparation, service, and consumption. Students prepare questions to ask panelists prior to their arrival. Students will plan a day's diet for individuals of several different religions which reflect dietary rituals and practices of that religion.

3.723 Students read stories of food festivals, holidays, or food customs of several countries around the world. Students discuss these and compare similarities among holiday customs:

Topical Outline

3.0 Factors Affecting Food Selection
3.723 Holiday Foods (Continued)
3.724 Effect of Mobility
3.73 Effect of Malnutrition

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
people, the budget, the cultural preferences, and the available table service.	**Intermediate Level** *Application:* Dramatizes the holiday food practices of a particular group of people. **Advanced Level** *Analysis:* Compares holiday food customs of various cultures or ethnic groups.	**Beginning Level** Students then plan a menu for the nearest holiday for lab unit and two guests. A budget is established for food and decorations. Consideration also may need to be given to the type of table service available. Students may evaluate the meal by using the following criteria: – Did menu fit holiday? – Did menu fit within budget? – Did people for whom menu was planned enjoy the occasion? – Were some items planned and prepared ahead of time to eliminate rush? – Were decorations interesting and did they make the meal more interesting?
3.724 Wherever there is a mixture of people of differing origins in a particular area, there are many varieties of foods consumed reflecting a mobile society. – migration – increased opportunities for travel When individuals try to adapt to new environments and/or cultures, they adopt new food choice patterns.	3.724 **Beginning Level** *Comprehension:* Illustrates the effect of a mobile society on the variety of foods available. **Intermediate Level** *Comprehension:* Describes new food choices he acquired upon moving to a new locale.	3.724 Students will choose lists of regional foods from a basket and decide which ones they think they might adopt if they moved to another area. * Students will describe the difference in the varieties of foods available in a large city and in an isolated area.
3.73 Widespread malnutrition in the world interacts with disease and other factors to produce short life expectancies and poor general health for millions of people.	3.73 **Beginning and Intermediate Levels** *Comprehension:* Explains nutritive content of foods typical of various cultures.	3.73 Students view film, *Hungry Angels* or *Children of the Sun*, or display pictures and articles from the *Life* magazine series, or similar series on foods of various cultures.

LEARNING EXPERIENCES

Intermediate Level

costumes may be worn. Members of the language class might describe meaning of various other customs of the holiday besides those related to foods.

- Students dramatize holiday food practices of various groups in Arizona.

3.724 Students who have lived in a foreign country or other parts of the U.S. can probably think of changes in their family's food habits which occurred as a result of moving where different foods were available. Example: Tacos–not available in North Central United States.

3.73 (Teacher prepares a list of food taboos from various cultures or groups as:
- In parts of Africa, eggs are not eaten because it is believed they cause people to steal.

Advanced Level

- How do holiday foods symbolize customs and cultures of the country?
- Which holidays have historical significance?
- How do food usage and eating habits express hospitality, trust, and good will on festive occasions?

3.724 Students plan, prepare and serve a series of meals representing the various ethnic groups living in the area. If possible, use traditional utensils, dress, background music, and eating patterns with the meals.

- Students write a short paper describing each meal, all the new foods they ate and other new experiences. Students explain why certain foods were used, reasons for the eating patterns and their personal reaction to each meal.

3.73 Teacher and/or students develop a set of cards on which are questions relative to the influence of circumstances of living or eating patterns as: "I live on a Polynesian island where breadfruit and taro are commonly eaten. Why are these items staples of my

Topical Outline
3.0 Factors Affecting Food Selection
  3.73 Effect of Malnutrition (Continued)
    3.731 Interrelated Factors in Malnutrition

BEST COPY AVAILABLE

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	**Beginning Level**
	Advanced Level *Analysis:* Analyzes food habits of various cultures in order to recognize the factors involved in wide spread malnutrition.	Students answer questions as: – What are the chances of the children in the film to grow to healthy, productive maturity? – How would you feel if you were their parents? – What effect will the nutrition of these children have on the development of their country? Students answer questions relating foods to various cultures and illustrate whether or not the foods consumed meet the Basic Four Food group requirements.
3.731 Malnutrition does not occur in isolation, but it is interrelated with many other factors in the lives of people: – lack of food and/or specific nutrient – unequal distribution of food in population – serious disease, parasites – population growth and composition of developing countries – urbanization and economic factors – technological development	3.731 **Intermediate and Advanced Levels** *Comprehension:* The student will summarize the factors involved in malnutrition.	3.731 Learning experiences are not appropriate for this conceptual statement at this level.

LEARNING EXPERIENCES

Intermediate Level

- Malaysian children are not allowed to eat papaya leaves because it is thought they cause colds.
- Vegetarians believe animal protein is not good for the body.

Use references to find others.) Students give examples of:

- other foods acceptable in some groups and not in others
- foods that are for special occasions
- other food attitudes and practices not supported by scientific evidence

Students answer questions such as:

- What nutrients may be missing?
- What other foods might be sources of the nutrients?

3.731 Students hear a speaker from the Public Health Department. or physician or visting nurse speak on the subject, "Malnutrition and Poor Dietary Habit in Our Community." Students discuss way in which they could help alleviate malnutrition in the community. (This could be developed into an activity for FHA.)

* Students describe factors in their own community which may cause people to be malnourished as:

- insufficient money to purchase food
- poor food habits
- centain foods not available
- serious diseases

Advanced Level

diet?" What nutrients do these staples contain? Student reads card and answers question, then checks back of card for possible answer.

* Groups of students arrange a display of the common foods or pictures of foods of their culture. The display will show:

- available nutrients
- missing nutrients
- possible diseases from lack of nutrients
- effects upon growth and general health

3.731 Students view a graph showing world population growth over the last 200 years and hear the teacher present information about population growth and the influences of industrial and technological development on population. Students discuss the effect of technological know-how in developing countries on population growth. Students read Malthus theories on population (*Essay on the Principles of Population*, 1788, Second Essay, 1803) and debate their validity today.

Topical Outline
3.0 Factors Affecting Food Selection
3.732 Malnutrition in the World
3.733 Hunger and Malnutrition in the United States

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
3.732 When widespread malnutrition occurs in the developing areas of the world and interacts with disease and other factors, short life expectancies and poor general health result for millions of people.	3.732 **Intermediate and Advanced Levels** *Comprehension:* The student will describe the effects of malnutrition on the population of developing countries.	3.732 Learning experiences are not appropriate for this conceptual statement at this level.
3.733 While there are adequate supplies of food in the United States, hunger and malnutrition do occur. Individuals and families on limited income are especially vulnerable to nutrition problems.	3.733 **All Levels** *Comprehension:* The student will report on cases of malnutrition described in nutrition studies in the United States.	3.733 Students respond to questions: – What is hunger: – Are hunger and malnutrition the same? – Can one be malnourished even though he is overweight? Students read references to arrive at a definition of hunger and malnutrition. Students examine two sets of menus and note that one has a large quantity of food, but lacks in protein, calcium, and Vitamin C. Students describe the results to an individual consuming this diet over a period of time. Students compare the cost of two daily diets–one with high amounts of starches, but lacking in proteins, vitamins and minerals; the other with

LEARNING EXPERIENCES

Intermediate Level

3.732 Students read a description of a world food problem in publications from World Health Organization, Agency for International Development, or Food Agricultural Organization. Students read about nutrition problems around the world (*People Food and Science*, Chapter 3, pp. 26-41). Students develop a chart illustrating daily dietary requirements for children and adults, and quantity of each requirement available in selected countries of Africa, Asia, South America, and United States. Students discuss the effects of lack of adequate food on the life span and general health of people.

3.733 Students cite some examples to show that people in the United States are malnourished:
- dental cavities
- high rate of coronaries
- poor complexion
- fatigue and lethargy

Students prepare three questions for a panel discussion on poor nutrition which might stem from economics or social conditions. Panel participants–role play or actual subjects–should include:
- aged citizen
- obese teenager
- alcoholic
- smoker
- member of low economic group
- drug addict

Advanced Level

3.732 Students discuss the effect on a country's development when a large segment of the population is inadequately nourished.

Students identify problems which may result from inadequate nutrition as:
- lower mental performance
- physical inefficiency
- nervous instability
- susceptibility to disease
- body disorders

* Students sponsor a World Food Crisis Awareness Week. Some activities during the week could be:
- art show with pictures depicting topics discussed
- special presentations for other classes
- school assembly with speakers, pamphlets on World Nutrition

Class may try to get commitment from student body to help with problem of world nutrition.

3.733 Students read references to obtain information about malnutrition in the United States such as: *The White House Conference on Food, Nutrition and Health*, by Jean Mayer, *Journal of the American Home Economics Association*, 61:499 (September 1969); "Faces of Hunger" in *Today's Health*, (October 1969); *Hunger, U.S.A.*; or view films, *Hunger in America (CBS)*, or *The Texas Nutrition Survey*.

Students debate which food assistance program would be most helpful to poor Americans:
- a guaranteed annual income with no government food programs
- a food stamp program
- a commodities food program

A letter to Congressmen may be written with recommendations for changes in the food assistance programs.

Topical Outline
3.0 Factors Affecting Food Selection
3.733 Hunger and Malnutrition in the United States (Continued)
3.74 Food in the Future

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
		adequate amounts of nutrients. Students draw conclusions relative to minimum costs to be adequately nourished. Students consider problems family on limited income may have in getting enough food, and ways food stamps or commodity foods may help.
3.74 New forms and processes for food are continually being developed to insure an adequate food supply for all people.	3.74 **Beginning Level** *Knowledge:* Identifies areas of future food development. **Advanced Level** *Analysis:* Researches the developments in the technology of future food supply.	3.74 Students give their reactions to a situation in the future when all foods would be eliminated and pills or capsules would be substituted. Students analyze the effect this would have on our daily lives–picnics, holiday meals, etc. How would it effect work, recreation, family, social activities? What else do we derive from eating other than nourishment? Students view film *Man in the Sea.* Students discuss problems of providing food in outer space and undersea. Students role play astronauts in space flight eating including physical, mental and social dimensions. Students brainstorm for new environments in which man may consume food such as in outerspace, underwater, underground. * Students consider what might be food related problems in these environments.

LEARNING EXPERIENCES

Intermediate Level

The questions might relate to effect of income on foods purchased, place, time, and comparisons while eating, uses of income for items other than food.

Students discuss, "Why don't families who have enough money always have a nutritious diet? What else is needed besides money to assume an adequate diet?"

3.74 Students list some trends which are predicted for the future as: increased population, greater urbanization, more mechanization, etc. (See Toffler, *Future Shock* for additional ideas.) Students discuss the influence these trends may have on food supply and eating patterns.

* Students do research and debate the topic, "As population increases will there be enough food available for everyone?"

Students examine some foods which have been processed by recently developed means as:
- irradiated
- freeze-dried
- use of antibiotics, etc.

Students will read references in magazines, journals to gain more information about a particular method. Students collect articles and pictures for bulletin board–"Food in the News." Students report in a visual way their findings to the class.

* Students develop a display on the effects of future technology on foods available to the consumer.

Advanced Level

Students list economic and cultural influences which contribute to poor dietary conditions. Students note which nutrients are most often lacking and speculate why this might be so.

* Students prepare a chart illustrating characteristics of hungry people, health consequences of hunger, causes for hunger, and groups of people most vulnerable to hunger.

3.74 Students identify ways the food they eat and their eating patterns have changed in the last five years. Students tell about predictions relative to foods for the future. Given examples of common foods, students brainstorm for new ways they might be processed or students "dream" how foods will be processed and the kinds of food available in the year 2000 A.D.

Students read article, "Luncheon in Space," *Nutrition Today*, June 1967, also "Dinner on the Moon," *Nutrition Today*, Autumn 1969. Students locate newspaper or magazine articles about eating provisions for the Sky Lab mission, and describe the advances in providing food in space.

Students respond to questions such as:
- What is different in space diet from earth diet?
- What are the mental and social implications of eating in space?
- What predictions can you make for greater innovation in space travel diet?
- How would you feel about eating a space traveler's diet and why?

Students with special interests in food aspects of space and ocean exploration investigate these subjects and give illustrated talks to the class.

* Students give examples of how research for such travel has influenced earthlings' diet.

TOPICAL OUTLINE

- 4.0 Exploration and Identification of Professional and Supportive Careers Related to Nutrition and Food
  - 4.1 Current Trends in the Occupation
    - 4.11 Changing Roles of People
    - 4.12 Changing Attitudes Toward Work
    - 4.13 Technological Changes
    - 4.14 Changes in Life-Styles
    - 4.15 Rate of Growth
  - 4.2 Physical, Mental and Psychological Characteristics Involved in Nutrition and Food Careers
  - 4.3 Educational and/or Training Requirements for Occupations in Nutrition and Foods
  - 4.4 Exploration and Identification of Careers in Nutrition and Food

BIBLIOGRAPHY

Books and Monographs

Westbrook, James H. *Aim For a Job in Restaurants and Food Service,* Richard Rosen Press, Inc., 1969.

California Occupational Guides, State of California, Department of Human Resources, 1971.

Career Research Monographs, The Institute for Research, 610 S. Federal Street, Chicago, IL 60605, 1971.

Careers for Youth in the Food Service Industry, National Restaurant Association, 1530 North Lake Shore Drive, Chicago, IL 60610.

McDonnell, Virginia B. and Messner, Julian. *Careers in Hotel Management,* 1971.

Lange, Howard F. *Catering,* Ahrens Publishing Co., Inc. 1955.

Costello, Joan M. and Wolfson, Rita P. *Concise Handbook of Occupations,* Doubleday and Co., Inc., 1971.

Hopke, William E., Editor. *Encyclopedia of Careers and Vocational Guidance,* Vol. I and II, Doubleday and Co., Inc., 1967.

Spencer, Linda and Messner, Julian. *Exciting Careers for Home Economists,* 1967.

Hatcett, Melvin S. *Food Service, a Distributive Education Manual* and *Food Service Answer Sheet*, Jesse Jones High School, Houston, Texas, 1970.

Mills, Nancy. *Home Economists in Action*, Scholastic Magazines, Inc., 1968.

Henkin, Shepard. *Hotel and Motel Industry*, Universal Publishing and Distributing Co., 1967.

Jobs in Professional Home Economics, Prepared in Consultation with American Home Economics Association, Science Research Associates, 1965.

Feingold, Normand S. and Swerdloff, Sol. *Occupations and Careers.* McGraw Hill, Inc., 1969.

Occupational Outlook Handbook, Superintendent of Documents, Washington, D.C.

Rosenthal, Jacob and Folsom, LeRoi A. *Opportunities in Food Preparation and Service*, Universal Publishing and Distributing Corp., 1969.

Endres, Joseph G., Ph.D. *Opportunities in Food Science and Technology*, Universal Publishing and Distributing Corp., 1969.

SRA Occupational Briefs, Science Research Associates, 1970.

Casola, Matteo. *Successful Mass Cookery and Volume Feeding*, Ahrens Publishing Co., Inc., New York, 1969.

Vetter, Louise and Scthney, Barbara J. *Women in the Work Force: Development and Field Testing of Curriculum Materials*, The Center for Vocational and Technical Education, The Ohio State University, Columbus, Ohio, 1972.

Periodicals

Career World: The Continuing Guide to Careers, Monthly, $2.95 per student per school year, Curriculum Innovations, Inc., 501 Lake Forest Ave., Highwood, IL 60040.

Forecast for Home Economics, April 1973, Volume 18, No. 8, "Career Education and the Work Ethic," and other articles.

Games

Life Career, Boocock, S. S., Western Publishing Co., Inc., 1969.

Filmstrips

The following filmstrips, with accompanying records, are available on loan from Home Economics Education, Division of Vocational Education, Arizona Department of Education, 1535 West Jefferson Street, Phoenix, AZ 85007. When requesting their use, please indicate date wanted and return them immediately after use.

Guidance Associates of Pleasantville, N. Y.

What You Should Know Before You Go To Work, Parts I & II, 14 & 15 minutes.

Preparing for the World of Work, Parts I & II, 12 & 16 minutes.

Getting and Keeping Your First Job, Parts I & II, 14 minutes each.

A New Horizon: Careers in School Food Service, 14 minutes.

Choosing Your Career, Parts I & II, 11& 16 minutes.

Your Job Interview.

A New Look at Home Economics Careers.

Job Attitudes: *Why Work at All?*, 10 minutes.
Trouble at Work, Parts I (8 min.), II (5 min.), III (6 min.), IV (5 min.).
A Job That Goes Some Place, Parts I & II
Liking Your Job and Your Life, Parts I (9 min.), II (7 min.), III (8 min.), IV (7 min.).

Jobs for You: It's Happening in Home Economics, (sound on casette tape).

National Restaurant Association, 1530 North Lake Shore Drive, Chicago, IL 60610.

Food Service: A Career to Consider, 10 minute sound/filmstrip with record.

Protecting the Public (food sanitation).

Where Do We Go From Here?, 16mm film.

(The National Restaurant Association items are also available on loan from Home Economics Education.)

Eye Gate House, Inc.

Education for Occupations, X335.

World of Work: Vocational Opportunities.

SVE Educational Filmstrips

Job Opportunities Now – Group One.

Audio Visual Aids

Home Economics Section, Division Vocational Education, Department of Education, 1535 West Jefferson, Phoenix, AZ 85007

Career Decisions–Finding, Getting and Keeping a Job Film loop with record
J. C. Penny Co.

Food Service a Career to Consider N.R.A., Film loop with record
I Like People Part I, I Like People Part II, The 10 Minute Ambassador Film loop with record
Admaster, Inc.

Modern Innkeeper 16MM Film
Preparing for an Interview Film loop with record
J. C. Penny Co.

A New Horizon: Careers in School Food Service Film strip
Guidance Associate

Other Materials

Framework for Home Economics Related Occupations, Home Economics Section, Division of Vocational Education, Department of Education, 1535 West Jefferson Street, Phoenix AZ 85013

Your Career in the Hotel-Motel Industry, The Educational Institute of the American Hotel and Motel Association, Kellogg Center, Michigan State University, East Lansing, MI 48823

Topical Outline

4.0 Exploration and Identification of Professional and Supportive Careers Related to Nutrition and Food
  4.1 Current Trends in the Occupation
    4.11 Changing Roles of People

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
4.0 Through exploration and identification of careers related to nutrition and foods, an individual may consider career opportunities in that area.	4.0 **All Levels** *Comprehension:* Identifies job opportunities at the entry level related to food and nutrition. *Responding:* Shows interest in learning about nutrition and food careers.	4.0 Students hear guest speakers on food and nutrition careers. Emphasis is placed on entry level jobs. (Or) Students play "Career Bingo." (See Appendix, p. A-23.)
4.1 When the changes in society which influence the world of work are considered, an individual will be able to make more realistic career choices.	4.1 **Advanced Level** *Analysis:* Concludes changing society influences the world of work.	4.1 Sequence of experiences for 4.11 to 4.15 is suggested to achieve this objective.
4.11 The changes occurring in the roles of men and women affect employment and family living patterns.	4.11 **Beginning and Intermediate Levels** *Comprehension:* Interprets changing roles of men and women that are influenced by changes in society. **Advanced Level** *Synthesis:* Role plays changing roles of people in today's society.	4.11 Students hear individuals from various stages of life cycle discuss changes in roles of men and women. Teacher identifies questions from panel discussion. Put questions in box. Students placed in groups draw questions to discuss and report back to class. * Students interpret changing roles by role playing situations affected by changes in society.

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
4.0 Students view a video tape of a person in a nutrition and food career. The person could be interviewed while on the job and the tape used in class.	4.0 A career day is held once a week during nutrition and foods unit. Each week individuals from supportive and/or professional nutrition and food careers speak, show slides, etc., of their careers.
4.1 Sequence of experiences for 4.11 to 4.15 is suggested to achieve this objective.	4.1 Utilizing a description of the life-style of people 70 years ago, the student will list changes in services and goods provided by the family, in roles of people, in attitudes toward work, in equipment and products, and in life-styles. He will determine nutrition and food services from outside the home which the family now utilizes.
4.11 Students interview families with working women. The families may vary from young marrieds with no children, to grandparents with all children grown. Single women should also be included. Students might ask questions such as reasons for working, how the housekeeping tasks are handled, problems involved, satisfactions gained. Teacher presents a pictorial display showing the historical changes in roles to lead into discussion of new roles of men and women today. Students will debate the pros and cons of women holding jobs which were formerly held by men and men holding jobs designated for women. * Class summarizes changes in roles and how their lives may be affected.	4.11 Students respond to a questionnaire (Appendix, p. 24) on their attitudes toward the world of work and working women. (*Women in the Work Force,* Louise Vetter and Barbara J. Sethney, pp. 36–38, and 46). Students read articles from current magazines on working women and summarize. Students develop a skit portraying the differences in roles played by men and women today as compared to the past. Points to be brought out might include: – Many women working outside homes today – Men assuming new household roles – Labor-saving household equipment playing new role – Women working to add additional income, to gain personal satisfaction During skit, students are asked to write the changes in roles they can identify. After skit, students discuss changes.

Topical Outline

4.0 Exploration and identification of Professional and Supportive Careers Related to Nutrition and Food
- 4.12 Changing Attitudes Toward Work
- 4.13 Technological Changes
- 4.14 Changes in Life-Styles

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
4.12 Increasingly, individuals desire work that will provide personal fulfillment as well as a means of earning a living.	4.12 **Beginning Level** *Knowledge:* Identifies the values most fulfilling when choosing a job. **Intermediate and Advanced Levels** *Analysis:* Examines values he considers most important in a job.	4.12 Student views filmstrip, *Liking Your Job and Your Life*, depicting how personal values influence means of earning a living. Students respond to questions as: – if abilities were equal would everyone be satisfied with the same job? – is economic "success" a top priority when choosing a job?
4.13 As technology is advanced, there will be a shift from manual labor to partial and/or complete automation which will affect career opportunities.	4.13 **Beginning Level** *Comprehension:* Illustrates use of automation in the food industry. **Intermediate Level** *Application:* Uses information about technological changes in nutrition and food occupations. **Advanced Level** *Analysis:* Analyzes the effect automation has on career opportunities.	4.13 Students brainstorm for examples in food preparation and service which have changed from manual labor to automation, as premeasured ingredients, dispensers for various beverages, diswashers, etc.
4.14 Changes in life-styles will affect career opportunities.	4.14 **Beginning Level** *Knowledge:* Lists changes in career opportunities affected by life-styles.	4.14 Students list ways in which changes in career opportunities will be affected by changes in life-styles. – increased travel – increased leisure time – higher standard of living – use of convenience foods – eating out

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
4.12 Students will identify characteristics they desire in an employment situation. These characteristics would relate to the amount of decision-making, variety of activity, pressure and deadlines, amount of creativity, age of people with whom they work, dress code, overtime, degree of updating of skills and knowledge needed. Students will analyze various nutrition and food occupations for the above qualities. Students will consider which jobs would be best for them in terms of their desires in an employment situation. Students might take a self=inventory or similar type of test to assess personal qualities as related to career choice.	4.12 Students review articles relative to changing attitudes about work. Students discuss what values in work they consider most important, i.e., wages, working conditions, interesting duties, fringe benefits, etc.
4.13 Speaker from trade or professional association concerned with nutrition and food presents information on current and future trends in areas of the industry such as: – quick service – nutritive labeling – automation of production and service – convenience foods Students apply information from talk to changes in nutrition and food they observe; i.e., nutritive labeling on cans, opening of a quick service eating place or food store, new food products.	4.13 Teacher makes bulletin board depicting many jobs available in foods and nutrition. Discuss machines used and number of people needed in the job ten years ago as compared with machines and people needed today. For example: baker in cafeteria who use to prepare dough, cut rolls to size by hand, shape and bake. Now baker may have prepared dough, machines to cut to size, and other automated aids. * Students choose job such as baker, dishwasher, food checker or counter girl. Using reference materials, determine the effect of automation upon the job.
4.14 Students list ways in which changes in their parents' jobs or those of other people have affected the life-style of individuals and families such as: – frequent moving – employee needing to travel – different shifts – longer or shorter hours	4.14 Given an example of a societal change such as an increase in eating out, the student will list ways this can affect job opportunities in nutrition and food occupations.

Topical Outline
4.0 Exploration and Identification of Professional and Supportive Careers Related to Nutrition and Food
4.15 Rate of Growth
4.2 Physical, Mental and Psychological Characteristics Involved in Career in Food and Nutrition

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
	Intermediate and Advanced Levels *Comprehension:* Illustrates the effect of changing Life-styles on career opportunities.	**Beginning Level**
4.15 Employment trends in the nutrition and food industries tend to show the greatest increase in the entry and midmanagement levels with a high rate of seasonal employment, particularly in areas where the economy is dependent on tourism and recreation.	4.15 **Beginning Level** *Comprehension:* Identifies employment trends in the nutrition and food area. **Intermediate Level** *Application:* Collects information about employment trends in nutrition and food.	4.15 Students hear a leader of the local hospitality or food service industry speak on trends and opportunities in Arizona. Students discuss what might be factors influencing these trends.
4.2 Management, production and service positions in food and nutrition careers may require varying qualifications.	4.2 **Beginning Level** *Knowledge:* Identifies physical, mental and psychological characteristics needed for food and nutrition jobs. **Intermediate Level** *Application:* Uses information about the personal qualities needed for a nutrition or foods occupation in making an occupational choice. **Advanced Level** *Analyze:* Analyzes the qualifications needed in nutrition and food occupations.	4.2 Use career ladder, in Appendix, 4.2 p. 27 . Have group divide into committees. Each committee is given puzzle pieces for one of the areas on the career ladder (management, production or service). After the pieces are fitted together they are to develop a chart identifying the physical, mental and psychological characteristics needed for the jobs in their puzzle. Students explain charts to the class. Invite a HERO student who is working in a food training station to come to the classroom to explain what he does in his work. Invite a parent who works in a restaurant, or as a dietitian or nutritionist to come and discuss his or her job. In a question-and-answer period, questions relative to the job and the characteristics needed in the employee could be discussed.

LEARNING EXPERIENCES

Intermediate Level

- layoffs
- need for retraining

4.15 A panel of representatives from restaurant, school cafeteria, quick serving place, and public health department discuss the trends they have observed in their occupation locally and statewide, indicating the growth or decline of various openings. (Or)
A speaker from local employment agency or state employment service discusses trends in nutrition and food opportunities locally and statewide.

* Using newspaper want ads, the student will list the types of employment available in the nutrition and food area.

4.2 Students view various pictures of people in the world of work. Some appear to have a positive attitude toward work while others have not.

* Students discuss which attitudes generally lead to success in jobs and why.

Students role play people occupying various types of positions in nutrition and food occupations to show what attitudes are necessary for job success.

* Students develop a checklist of personal qualities needed for occupations in nutrition and food such as good health, stamina, friendliness, desire to serve, and rate themselves on these qualities.

Advanced Level

4.15 (See Intermediate Level).

4.2 A small group of students might go to either a restaurant, school cafeteria, or hospital kitchen to interview and spend part of the day with persons in different jobs at each location. The students would report to the class on the common characteristics of people involved in nutrition and food work.

Students will role play individuals in nutrition and food occupations to illustrate personal qualities needed for job success.

* Students will make a bulletin board, chart or poster with a large flower or tree. On the flower center or tree trunk, the qualifications needed by individuals in nutrition and food occupations will be listed. Special characteristics required for specific jobs will be listed on the petals or trunk.

Topical Outline

4.0 Exploration and Identification of Professional and Supportive Careers Related to Nutrition and Food
  - 4.3 Educational and/or Training Requirements for Occupations in Foods and Nutrition
  - 4.4 Exploration and Identification of Careers in Foods and Nutrition

BEST COPY AVAILABLE

* Beginning Level

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
4.3 When the educational and/or training requirements for occupations in nutrition and food are considered, decisions can be made relative to career goals.	4.3 **Beginning Level** *Comprehension:* Illustrates different career choices require varying types of educational preparation. **Intermediate Level** *Comprehension:* Explains that different career choices require varying types of educational preparation. **Advanced Level** *Synthesis:* Plans the educational experiences that will be required for the career of his choice.	4.3 Teacher prepares flannel board with headings: Semi-skilled, skilled, technical and professional and has a large selection of flannel-backed pictures showing foods and nutrition careers. Students discuss reasons why job is called semi-skilled, skilled, technical and professional. * Students take turns grouping pictures on flannel board in the proper categories.
4.4 Familiarization with the details of a job may aid student in choosing a career.	4.4 **Beginning and Intermediate Levels** *Application:* Collects information concerning an entry level job related to food and nutrition. **Advanced Level** *Synthesis:* Role plays occupations in nutrition and food area.	4.4 Students take a field trip to see persons working in an entry level food and nutrition job. Students will select an entry level job in which they think they may be interested and explore, using a teacher-developed form, "A Career in Food and Nutrition." Each student draws conclusions based on his findings as to whether or not he may still be interested in that career.

LEARNING EXPERIENCES

Intermediate Level

4.3 Students hear a representative of HERO program working in a nutrition and food job talk about his training.

Students will locate references and other sources of information about the availability of additional training and education in the area of nutrition and food. Students consider the effect additional training or education might have on job success.

* Students are given a list of several nutrition and food occupations. Students indicate the amount of education needed for each occupation.

4.4 Students view video tapes of operation at Camelback Inn.

Students complete a "Shadow Study" of a food service employee in the school cafeteria. The student quietly observes all of the tasks the person completes in his job during a day or part of a day. The student then invites the worker to visit the class. When the food service worker visits the class, the student introduces her/him and explains the jobs the worker performs and how this work contributes to the students. The worker might answer questions.
(Or)
Students visit a doughnut shop and observe the skills of a person in this area. As the students watch the workers, encourage them to consider how the cost of the individual product would vary if the worker used too much or too little dough, filling, frosting.

Advanced Level

4.3 Using Occupational Handbook and other resources, students will find the appropriate title and job description for occupations related to nutrition and food. Students will list the tasks performed in the job and the level of education expected of persons employed in the job.

Students hear a representative of a community college, university, or private training school describe his/her educational program in nutrition and foods.

* Students interested in a nutrition and food career develop a plan for obtaining the training or education needed for their occupational choice.

4.4 Students will contact school counselor and check library references to identify as many jobs as possible that relate to nutrition and food. Students will compile information into a notebook or scrapbook for reference by class members.

* Students adapt a television program, "Will the real ________________ please stand up?" Utilizing information gathered on careers related to nutrition and foods, the class could be divided into teams. The teams could take turns asking the three contestants questions. Each contestant must truthfully answer the questions about the occupation with a yes or no. The teams would then vote on which contestant best represented the occupation.

TOPICAL OUTLINE

5.0 Factors Involved in Food Preparation
  5.1 Orientation to Working in the Kitchen
    5.11 Cooperation with Others
    5.12 Personal Grooming
    5.13 Sanitary Practices
    5.14 Safety Practices
      5.141 Types of Hazards
      5.142 First Aid for Emergencies

  5.2 Small Kitchen Equipment
    5.21 Identification and Selection
      5.211 Small Appliances
      5.212 Hand Tools
    5.22 Use and Care of Small Equipment
    5.23 Substitution and Improvision of Equipment

  5.3 Kitchen Organization and Management
    5.31 Work Centers
      5.311 Task Simplification
      5.312 Organizing Work Centers
      5.313 Kitchen Floor Plans
    5.32 Storage
      5.321 Equipment
      5.322 Supplies
    5.33 Large Equipment
      5.331 Use and Care
      5.332 Selection

  5.4 Using Recipes
    5.41 Cooking Terms
    5.42 Measuring Ingredients
    5.43 Equivalents and Substitutions
    5.44 Altering Recipes
    5.45 Solutions to Cooking Crises

  5.5 Customs for Eating
    5.51 Table Appointments and Setting
    5.52 Type of Serving
    5.53 Mealtime Manners

  5.6 Principles and Procedures for Preparing Food and Food Products
    5.61 Fruits and Vegetables
      5.611 Raw
      5.612 Fruit Cookery
      5.613 Vegetable Cookery
    5.62 Breads and Cereals
      5.621 Cereal and Pastas
      5.622 Baked Flour Mixtures
    5.63 Milk and Milk-Rich Food
    5.64 Meat and Meat Products, Extenders and Substitutes
      5.641 Principles of Meat Cookery
      5.642 Meat Extenders and Substitutes
      5.643 Eggs
    5.65 Other Foods
      5.651 Sugar Cookery
      5.652 Fats and Oils
      5.653 Seasonings

  5.7 Meal Planning
    5.71 Food Patterns
      5.711 Three Meal
      5.712 Multiple Meal
      5.713 Snacks
    5.72 Sensory Appeal
    5.73 Eating Away From Home
    5.74 Modifying Foods for Individual and Family Needs
      5.741 Age Groups
      5.742 Health Problems
      5.743 Multi-role Families
      5.744 Emergency Situations
    5.75 Leftovers
    5.76 Meal Planning Tools

  5.8 Preparing and Serving Meals and Snacks
    5.81 Efficient Use of Resources
      5.811 Time-Saving Techniques
      5.812 Convenience Foods

TOPICAL OUTLINE (Continued)

- 5.82 Meals for Special Occasions
  - 5.821 Holidays
  - 5.822 Parties
  - 5.823 Camping, Cookouts and Picnics
- 5.83 International and Regional Foods
- 5.9 Food Preservation
  - 5.91 Freezing
  - 5.92 Canning
  - 5.93 Chemicals
  - 5.94 Other Preservation Methods

BIBLIOGRAPHY

Books

Barclay, Champion, Brinkley, and Funderburk. *Teen Guide to Homemaking,* 3rd ed. New York: McGraw-Hill Book Company, 1972.

Berry, Mary. *Manners Made Easy,* New York: McGraw-Hill Book Company, 1966.

Carson, Byrta and Ramee, MaRue Carson. *How You Plan and Prepare Meals,* 2nd ed. New York: McGraw-Hill Book Company, 1968.

Cote, Patricia. *People, Food, and Science,* Boston: Ginn and Company, 1968.

Cronan, Marion L. and Atwood, June. *First Foods,* Peoria: Charles A. Bennett Company, Inc., 1971.

Davis, Martha J. and Peeler, M. Yvonne. *Lessons in Living for the Young Homemaker,* Boston: Ginn and Company, 1970.

Fleck, Henrietta. *Introduction to Nutrition,* 2nd ed. New York: Macmillan Company, 1971.

Handbook of Food Preparation, American Home Economics Association, Washington, D.C., 1964.

Kinder, Faye. *Meal Management,* New York: Macmillan Company, 1968.

Lewis, Banks, and Banks. *Teen Horizons,* New York: Macmillan Company, 1970.

McDermott, Irene E., Trilling, Mabel B., and Nicholas, Florence W. *Food For Modern Living,* Philadelphia: J.B. Lippincott Company, 1967.

McDermott, Irene E., Norris, Jeanne L., Nicholas, Florence W. *Homemaking For Teen-Agers, Book II,* 3rd ed. Peoria: Charles A. Bennett Company, Inc., 1972.

McLean, Beth Baily. *Meal Planning and Service, Revised,* Peoria: Charles A. Bennett Company, Inc., 1964.

Medved, Eva. *The World of Food,* Boston: Ginn and Company, 1970.

Shank, Fitch, Chapman, Sickler. *Guide to Modern Meals,* 2nd ed. New York: McGraw-Hill Book Company, 1970.

Vanderbilt, Amy. *Vanderbilt's New Complete Book of Etiquette,* Garden City: Doubleday and Company, 1963.

White, Ruth B. *You and Your Food,* Englewood Cliffs: Prentice-Hall, Inc., 1966.

Reader's Digest. *Secrets of Better Cooking,* Reader's Digest Association, Pleasantville, New York, 1973.

Hamm, Marie Roberson. *The Waring Blender Cookbook,* Fawcett Gold Medal Book, 1971.

The Blender Way to Better Cooking, Edited by Betty Sullivan, New York: Golden Press, 1965.

Foods of the World Series, New York: Time Life Books, 1969.

The Reynolds Brown-in-Bag Cookbook, Reynolds Metals Company, P.O. Box 27003, Richmond, VA. 23261.

Pamphlets

A Guide to Metal Cookware and Bakeware, Metal Cookware Manufacturers Association, Box D, Fontana, Wisconsin. (First copy free)

Alice in Partyland, Dr. Pepper Company, Box 5086, Dallas, Texas.

Catalog of Education Material, Florida Citrus Commission, Youth and School Service Department, Box 1720, Lakeland, Florida.

Convenience Foods in the Grocery Basket, United States Department of Agriculture, Marketing Bulletin No. 22. Superintendent of Documents, Washington, D.C.: U.S. Government Printing Office.

Eggs in Family Meals, United States Department of Agriculture Home and Garden Bulletin No. 103, Washington, D.C.: U.S. Department of Agriculture.

First Bell Means Breakfast, American Institute of Baking, Consumer Service Department, 400 East Ontario Street, Chicago, Illinois.

Fleischmann's Bake-it-easy Yeast Book. Fleischmann's Yeast, P.O. Box 509, Madison Square Post Office, New York, N.Y. 10010.

Food of the World. Bakers of American Products, 20 North Wacker Drive, Chicago, Illinois.

Home Care of Frozen Foods. United States Department of Agriculture Home and Garden Bulletin No. 69. Superintendent of Documents, Washington, D.C.: U.S. Government Printing Office.

Map Your Meals. American Institute of Baking, 400 East Ontario Street, Chicago, Illinois.

Martha Logan's Meat Handi-Book. Swift and Company, Martha Logan, 1919 Swift Drive, Chicago, Illinois, 60521.

Milk: How to Buy, Store and Use it. Cornell Extension Bulletin No. 1000, Ithaca, New York: New York State College of Home Economics.

Preserving Florida Citrus Fruits. Gainesville, Florida: Agriculture Extension Service. (Bulletin No. 144)

Quick and Easy Arizona Beef Ideas. Arizona Beef Council, 4851 East Washington, Phoenix, Arizona 85034.

Score With Breakfast. American Institute of Baking, 400 East Ontario Street, Chicago, Illinois.

Soft Drink and Balanced Diet. American Bottlers of Carbonated Beverages, 1128 Sixteenth Street, N.W., Washington, D.C.

Teeners Don't Eat Right. The Milk Industry Foundation, Washington, D.C.

The Art of Salad Making. Libby, McNeill and Libby, Department of Home Economics, Chicago, Illinois.

The Label Tells the Story. Grocery Manufacturers of America, Inc., 205 East 42nd Street, New York, N.Y.

The Story of Table Service. Sears Roebuck and Company, Consumer Education Division, Chicago, Illinois, 1957.

Dairy Council of Arizona, 3737 East Indian School, Phoenix, Arizona 85018.
    Backyard and Beyond (a booklet on outdoor eating)
    Buttermilk (information sheet)
    Cheese (information sheet)
    Cottage Cheese (information sheet)
    Creative Cooking with Cottage Cheese
    Dairy Drinks for Any Season
    Easy Meals That Please
    Ice Cream and Similarly Frozen Foods (information sheet)
    Sour Cream (information sheet)

United States Department of Agriculture, Government Printing Office, Washington, D.C. 20250.
    Let Your Kitchen Arrangement Work For You
    Nutritive Value of Food (30 cents)
    Step Saving "U" Kitchens No. 14
    Storing Perishable Foods in the Home
    Home Care of Purchased Frozen Foods
    Home Freezing of Fruits and Vegetables
    Home Freezing of Poultry
    Keeping Food Safe to Eat
    Freezing Combination Main Dishes
    Home Canning
    Family Food Stockpile for Survival
    Storing Perishable Foods in the Home

Periodicals

"Equipment and Management." *Forecast/Coed*, February, 1970.

"Meat In and Out of the Freezer." *What's New in Home Economics*, March, 1968.

Films

A Touch of Magic. 12 min., color, Associated Films, Incorporated, 779 Stevenson Street, San Francisco, California, Free.

Date for Dinner. Kimberly-Clark, Education Department, Neenah, Wisconsin.

Foods of Hawaii. C & H Sugar Company, 215 Market Street, San Francisco, California.

How To Be a Successful Hostess. 27 min., color, Associated Films, Incorporated, 779 Stevenson Street, San Francisco, California, Free.

Biscuit Bakin' and Muffin Mixin'. color, Wheat Flour Institute, 309 West Jackson Boulevard, Chicago, Illinois.

Breakfast for B. J. color, The Pillsbury Company, Educational Department, Minneapolis, Minnesota, Free.

Candies and Confections. Evaporated Milk Association, 228 North LaSalle Street, Chicago, Illinois, $4.00, (A cooking series set of eight, $32.00)

Class Parties. McGraw-Hill Book Company, 330 West 42nd Street, New York, New York.

Come to a Party R.S.V.P. color, Pineapple Growers Association, 215 Market Street, San Francisco, California.

Cookware in Kitchen Management. color, Aluminum Association, Audio-Visual School Service, 120 Fulton Avenue, Garden City Park, New York.

Designing Desserts. color, General Foods Corporation, 250 North Street, White plains, New York, Free.

Dishwashing: A Dirty Story. color, 105 frames, Calgon Corp., Pittsburgh, Pennsylvania. Order from: Association-Sterling Films, Inc., 8615 Directors Row, Dallas, TX 75247, free loan.

Evaporated Milk color, Evaporated Milk Association, 910 17th Street, North West, Washington, D.C.

Ground Beef-Passport to Far Away Eating. color, Evaporated Milk Association, 910 17th Street, North West, Washington, D.C.

How To Buy Meat. (In three parts) Swift and Company, Martha Logan, Box 2021, Chicago, Illinois.

Party Themes and Party Recipes. color, Carnation Company, Department A-90, Los Angeles, California, Free

Patterns For Parties. B&W Towle Manufacturing Company, Towle Silversmiths, Newburyport, Massachusetts.

Quick Ways To Come Up With Exciting Entrees, Snacks, Quick Breads and Desserts Using Canned Pineapple. color, Pineapple Growers Association, 215 Market Street, San Francisco, California.

Rubbermaid, How To Save 30 Minutes a Day. color, Rubbermaid, Incorporated, Wooster, Ohio.

Sandwich, Please. color, Nebraska Wheat Commission, Nutrition Education Division, 606 Trust Building, Lincoln, Nebraska.

Small Electrical Appliances. Sears Roebuck Company, Consumer Education Division, D-703, 925 South Homan Avenue, Chicago, Illinois, Free loan.

Song of a Salad. color, H. J. Heinz Company, Box 28, Pittsburgh, Pennsylvania, Free.

Table Modes and Manners. color, Melamine Council. 800 Second Avenue, New York, New York, Free.

Teen Time Cooking With Carnation. color, Carnation Company, Department A-90, Los Angeles, California, Free.

The Sterling Silver Way. Sterling Silversmiths of America, 551 Fifth Avenue, New York, NY 10017.

Nonfat Dry Milk–Instantly Yours. American Dry Milk Institute, Research education, 130 North Franklin Street, Chicago, Illinois.

New Room in Your Kitchen. Associate Films, Inc., 600 Madison Avenue, New York, NY 10022.

Your Space Age Kitchen. Agents for Sears Consumer Information Services, 512 Burlington Avenue, LaGrange, IL 60525.

Good Table Manners. (11 min.), Coronet Films, Coronet Building, Chicago, Illinois, M.P.

Fostoria Crystal, Moundsville, West Virginia, Franciscan Dinnerware, Los Feliz Street, Los Angeles, California.
Let's Talk Table Settings
Let's Talk Taste

General Mills, Incorporated, Betty Crocker Dept., Minneapolis, Minnesota.
Batter Breads
Better Biscuits
Cooky Wise
Fun with Frosting
Beautiful Cakes
Breads You Bake with Yeast
Easy as Pie
Mealtime Can Be Magic

Kraft Foods, P.O. Box 986, Dayton, Ohio
Guide to Cheese, Guide to Cheese Making, Guide to Vegetables.

McGraw-Hill, 330 West Forty-second Street, New York, New York, Loan.
Etiquette at Home, Etiquette in Public, Manners Mean More Fun, Perfect Party, Safety in the Kitchen, Table Manners, Table Talk.

Pan-American Coffee Bureau, 120 Wall Street, New York, New York
Coffee Please
The New Hostess at Home

Public Health Services, Audio-visual Facility, Atlanta, Georgia.
Food Sanitation
Utensils and Equipment, (Part II, color, free)
Washing and Storing, (Part III, color, free)
Refrigeration and Food Handling, (Part IV, color, free)

Egg Basics. Ralston Purina Company, Checkerboard Square, St. Louis, Missouri.

Reynolds Metal Company, 6601 West Broad Street, Richmond, Virginia.
Outdoor Cooking
Party Planning

Kitchen Planning. Sears, Roebuck and Company, Public Relations, 4640 Roosevelt Blvd., Philadelphia, PA 19132.

China First. Syracuse China Corporation, 1858 West Fayette Street, Syracuse, New York.

Sanitation, Storage and Collection of Refuse. Tennessee Department of Public Health, Nashville, Tennessee.

Home Economics Section, Division of Vocational Education, Department of Education, 1535 West Jefferson, Phoenix, AZ 85007.

16MM Films with Teachers Guides

Using Standardized Recipes
Fast Sandwich Making
A Cool Head for Salads
Vegetable Preparation
Broiling
Deep Fat Frying
Presentation of Food and Beverage
Sandwich Prep and Presentation
The Hamburger Sandwich
Give Your Eggs A Break
Braising and Stewing
Roasting
Carving The Rib Roast

Transparencies

Co-Ed/Forecast Visual Masters, 904 Sylvan Avenue, Englewood Cliffs, New Jersey.

Kitchen Planning. No. 4630, NCR 6, $2.50.
Basic Food Preparation Techniques. No. 4632, NCR 8, $2.50.

Minnesota Mining and Manufacturing Company, Visual Products Division, Box 3100, St. Paul, Minnesota.

Interpreting a Recipe. Printed Originals, Catalog No. 374, $1.25. Prepared color transparencies, catalog No. 874, $33.00.

Eggs. Printed Originals, Catalog No. 375, $1.25. Prepared color transparencies, Catalog No. 875, $33.00.

Meat Selection and Preparation. Printed Originals, Catalog No. 372, $1.25. Prepared color transparencies, Catalog No. 872, $33.00.

How to Buy and Cook Meats. Logan, Martha, Swift and Company, 1919 Swift Drive, Oak Brook, Illinois.

Cake Selection. Proctor and Gamble, P.O. Box 599, Cincinnati, OH 45201, (Free).

Topical Outline

5.0 Factors Involved in Food Preparation
    5.1 Orientation to Working in the Kitchen
        5.11 Cooperation with Others

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.0 When the guidelines influencing health and safety practices, use of equipment, time and energy, meal planning, preparation and serving are considered, food preparation contributes to the well-being of individuals and families.	5.0 **Beginning Level** *Comprehension:* Illustrates topics involved in food preparation.	5.0 Students brainstorm for interests and concerns they have relative to food preparation. Students volunteer to put together a poster puzzle made of all the topics to be covered. Poster is taken apart and each piece is added as the class studies the topic.
5.1 The performance of routine tasks related to food preparation in a cooperative manner, using safe and sanitary practices, contributes to health and a pleasant working environment.	5.1 **Beginning Level** *Application:* Uses effective management procedures when working with others in the kitchen. **Intermediate Level** *Analysis:* Analyzes case situation for effective management. **Advanced Level** *Evaluation:* Evaluates ability to manage working relations in the kitchen.	5.1 Students are given recipes for simple products such as cookies and directed to prepare them without further instruction. Following the lab, students review the problems encountered as: ran out of time, poor product, kitchen not left clean, couldn't decide who should do what task, someone burned, cut. Students suggest ways to help solve these problems.
5.11 When members of each kitchen cooperate, optimum use of time and success in food preparation results.	5.11 **Beginning Level** *Application:* Performs food preparation tasks cooperatively with other members of kitchen units. **Intermediate Level** *Synthesis:* Role plays situations showing effect of cooperation in foods lab situation.	5.11 Students in each unit develop a list of the tasks to be done in a lab class. Students group tasks according to number of people in unit and devise system for rotating duties. After initial tryout, students review, plan, and make needed adjustments.

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
5.0 (See Beginning Level.)	5.0 (See Beginning Level.)
5.1 Students analyze case study, "How Well Did Mary Manage?," Appendix A-28. Students share results. Students then prepare another recipe as member of unit watches and lists examples of good and poor management.	5.1 Students plan, prepare, and serve a simple snack or meal. Students evaluate the performance of their units for cooperation, efficient use of time, safety and sanitary practices. Students review information as indicated in evaluation.
5.11 Students role play common disagreements that occur in laboratory situations as: who is to perform various tasks, not doing their share of the work, using equipment, teasing. Students then role play illustrating cooperative behavior in the kitchen.	5.11 (See Intermediate Level.)

Topical Outline

5.0 Factors Involved in Food Preparation
5.12 Personal Grooming
5.13 Sanitary Practices

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.12 Personal cleanliness and grooming reduces the transfer of contaminants to food.	5.12 **Beginning Level** *Comprehension:* Summarizes reasons for personal cleanliness when preparing food. **Intermediate Level** *Application:* Demonstrates reasons for personal cleanliness in the kitchen. **Advanced Level** *Analysis:* Makes conclusions regarding the transmittal of food-borne disease. *Valuing:* Follows practices in personal cleanliness and grooming in working with food.	5.12 Students view pictures or actual models of two people working in a kitchen. One has long loose hair, dirty hands and fingernails, dangling jewelry or wide cuffs, no apron, etc. * Students develop a personal grooming checklist for working in the kitchen. Students give a reason for each item on checklist.
5.13 When sanitary practices are used in the handling of equipment, the spread of bacteria, microorganisms is decreased. – dishwashing – food handling	5.13 **Beginning Level** *Comprehension:* Explains what sanitary practices in handling equipment and food are. **Intermediate Level** *Application:* Applies sanitation principles in handling equipment and food. **All Levels** *Precision:* Manipulates equipment using sanitary practices. **All Levels** *Valuing:* Follows sanitary practices in the handling of equipment and food.	5.13 Student presents silent demonstration of sanitary diswashing as other students make a list of sanitary procedures they observe. Students share lists and develop a recommended procedure for washing dishes. Students list all the tasks to be done in cleaning a kitchen after a meal. Students show sanitary methods of performing tasks as cleaning range, work surfaces, handling garbage, putting away leftovers. * Students give reasons for sanitary practices in kitchen units as: "It is important to use hot water to rinse dishes because ___________."

LEARNING EXPERIENCES

Intermediate Level

5.12 Students prepare agar plates using hair, thumbprint, saliva, use a microscope to view the plates the day prepared and several days later. Students give reasons for personal cleanliness in the kitchen.

* Students present skits demonstrating correct and incorrect ways of handling food as:

- fingers in hair or on face, then in food
- wiping hands on apron or dish towel
- sneezing or coughing while continuing to mix food, etc.

5.13 Students hear resource speaker from health department, school cafeteria or restaurant explain sanitary practices in washing dishes and handling food in public eating places. Students give reasons for these rules.

(Or)

Students view filmstrip, *How to Save 30 Minutes a Day*, and summarize sanitation practices show.

* Students, in pairs, demonstrate sanitary methods of washing dishes, tasting food, handling and cleaning utensils and equipment, cleaning work surfaces.

Advanced Level

5.12 Students observe an illustrated talk or read references to gain information about food-borne diseases such as botulism, dysentery, salmonella, trichinosis. (See Commercial Food Preparation, 6.31, for additional learning experiences on this topic.)

* Students make generalizations regarding the transmittal of food-borne diseases.

5.13 (See Commercial Food Preparation, 6.32 to 6.37, for additional learning experiences on this topic.)

Topical Outline
5.0 Factors Involved in Food Preparation
5.14 Safety Practices
5.141 Types of Hazards

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.14 When routine tasks in meal preparation are performed in a manner which is safe and orderly, they contribute to the efficiency of food preparation.	5.14 **Beginning Level** *Comprehension:* Describes safety practices in the kitchen. **Intermediate Level** *Application:* Uses safe practices in the kitchen. **All Levels** *Valuing:* Follows safety practices in performing tasks in the kitchen. **All Levels** *Precision:* Manipulates equipment and performs tasks in a way which is safe.	5.14 Students collect clippings from newspapers, or report on accidents occurring in the kitchen which they have heard about in the home, neighborhood or community. Students exchange ideas on how to prevent these accidents.
5.141 When there is an awareness of common potential kitchen hazards, it is easier to correct them and prevent accidents.	5.141 **Beginning Level** *Comprehension:* Gives examples of several common kitchen safety hazards. **Intermediate Level** *Application:* Demonstrates ability to locate and remove kitchen safety hazards.	5.141 Prior to class, teacher sets up laboratory with several hazardous situations such as pot holder on burner, pot near edge of counter, etc. * Students conduct "hazard hunt" to locate dangers and make recommendations to correct them. Team finding and correcting largest number wins small award. Students list ways fire could occur in kitchen. Students observe demonstration (by firemen, if possible) of how to extinguish various kitchen fires as grease, paper or wood, electrical. * Students demonstrate how to use fire extinguishers.

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
5.14 Students brainstorm to list ways orderliness contributes to safety in the kitchen. Students, in groups, check the laboratory kitchens for orderliness, and make recommendations for solutions to problems discovered. * Students check their home kitchens for safety and orderliness. Students find solutions they may personally use to correct any problems.	5.14 (See preceding levels or Commercial Food Preparation, 6.14, if additional learning experiences are desired.)
5.141 Students role play situation of a small child in a kitchen and the safety hazards he could encounter. * Students demonstrate ten safety suggestions in the kitchen to prevent accidents to small children. (See Appendix A-29 .)	5.141 (See preceding levels or Commercial Food Preparation, 6.24, if additional learning experiences are desired.)

Topical Outline

5.0 Factors Involved in Food Preparation
    5.142 First Aid for Emergencies
  5.2 Small Kitchen Equipment

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.142 The effective use of first aid may prevent further injury in an emergency.	5.142 **Beginning Level** *Comprehension:* Explains first aid procedures for common kitchen accidents. **Intermediate Level** *Application:* Performs first aid procedures for common kitchen accidents.	5.142 Students list types of accidents that occur in the kitchen as burns, cuts, falls, etc. School nurse or person trained in first aid demonstrates how to treat various injuries.
5.2 Knowledge of the selection, use and care of small kitchen equipment contributes to more effective performance of food preparation tasks.	5.2 **Beginning Level** *Application:* Uses and cares for small kitchen equipment. **Intermediate Level** *Analysis:* Examines small kitchen equipment for desired features of construction. **Advanced Level** *Synthesis:* Plans for purchasing small kitchen equipment. *Precision:* Operates portable kitchen equipment according to directions.	5.2 (See Intermediate Level.)

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
5.142 Students review common kitchen injuries and first aid treatment suitable for each. Students prepare a first aid kit for the kitchen and demonstrate how to use materials in the kit.	5.142 (See preceding levels or Commercial Food Preparation, 6.24, if additional learning experiences are desired.)
5.2 Students view demonstration showing selection, use, and care of a variety of small appliances. (Teacher invites home service representative from utility company to do demonstration.) Students inspect classroom equipment and consider the appliance features related to the previous demonstration.	5.2 (See Intermediate Level.)

Topical Outline

5.0 Factors Involved in Food Preparation
- 5.21 Identification and Selection
  - 5.211 Small Appliances
  - 5.212 Hand Tools
- 5.22 Use and Care of Small Equipment

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.21 Careful identification and selection of small kitchen equipment is necessary for efficient use and durability. 5.211 When construction features of small appliances are taken into consideration in relation to use, care, and length of life, a wiser selection can be made. 5.212 The selection and use of approporiate hand equipment contributes to efficient use of time and energy, safety, and contributes to desired results.	5.21–5.212 **Beginning Level** *Knowledge:* Identifies portable small equipment correctly. **Intermediate Level** *Comprehension:* Illustrates the types and uses of small kitchen equipment. **Advanced Level** *Synthesis:* Plans for the selection of small kitchen equipment.	5.21–5.212 Students conduct a kitchen tool treasure hunt. Each group of students is given a list of tools found in their kitchen unit. Students are to collect and place in order on a tray the designated tools. The first group to complete the task wins. Students bring to class a piece of hand equipment and show how it works. Students show or describe kitchen "gadgets" they have seen advertised. Students discuss which are useful, desirable, useless, and why. Students view filmstrip, *Cookware in Kitchen Management*.
5.22 When small kitchen equipment is properly used and cared for, time and energy may be saved, accidents prevented, desired results achieved, and longer trouble-free performance enjoyed.	5.22 **Beginning Level** *Comprehension:* Explains use and care of small kitchen equipment. **Intermediate Level** *Application:* Demonstrates appropriate use and care of small kitchen equipment. **Advanced Level** *Synthesis:* Write information for use and care of equipment.	5.22 Students brainstorm for safety practices when using portable equipment as: plugging and unplugging appliances, slicing foods, opening cans, washing knives and glassware. Students experiment with various tools for accomplishing one task as peeling potatoes, scraping carrots. Students report which tool was most useful. * Students complete statement such as, "A result of caring for and using small equipment correctly is__________."

LEARNING EXPERIENCES

Intermediate Level

5.21–5.212 Students select pictures of portable kitchen equipment from magazines and describe the uses of each. Students compare the costs of purchase, special features, energy expenditure, durability and guarantees of the pieces of equipment.

* Students observe a display of small equipment items constructed of a variety of materials as glass, plastic, aluminum, copper, etc. Price of each should be included. Students work in groups analyzing advantages and disadvantages of each in use, care, ease of cleaning, appearance and cost.

5.22 Students, in small groups, demonstrate correct use and care of small equipment as electric mixer, can opener, waffle iron, etc. Students prepare a special product using a small appliance as:

Dessert waffles in waffle iron
Milk shakes in blender
Upside down cake in skillet
Biscuits in toaster-oven

Advanced Level

5.21–5.212 Students examine portable equipment in their kitchen units. Students summarize equipment in two lists: one for equipment which is necessary for establishing a kitchen and one for equipment that is desirable, but may be added later. Students hear a resource speaker from utility company, or extension or department store demonstrate variety of portable kitchen equipment available today.

* Students plan for portable kitchen equipment purchases. The plan should include the basic items needed, the type of materials, the desired features, and price. Students select two or three items in their plan and actually shop for them. Report results to class including store and brand names, prices, special features.

5.22 Students review booklets for use and care of small appliances as toasters, electric mixers, blenders and assess which information is useful. Students check booklets for clearly written directions, special care, warranty or guarantee.

* Students, in pairs, write an information booklet on use and care of an imaginary new appliance.

Topical Outline

- 5.0 Factors Involved in Food Preparation
    - 5.23 Substitution of Equipment
  - 5.3 Kitchen Organization and Management
    - 5.31 Work Centers

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.23 When a specific piece of equipment is not available, other item may be substituted or improvised.	5.23 **Beginning Level** *Comprehension:* Gives examples of ways to substitute and improvise equipment. **Intermediate Level** *Application:* Uses substitutions for a specific piece of equipment when necessary.	5.23 Students list reasons why one may need to improvise equipment in given situations as: when broken, camping, lack of money, packed away. Students give examples they have observed of improvised equipment: can or glass for biscuit cutter, bottle for rolling pin, flat lid for a cookie sheet, jar or can for mixing bowl.
5.3 When kitchen equipment and supplies are arranged for efficient use of time and energy, a contribution is made to the ease of and satisfaction in providing food for individuals and families.	5.3 **Beginning Level** *Comprehension:* Illustrates organization of equipment and supplies for efficient performance of tasks. **Intermediate Level** *Application:* Arranges equipment and supplies for efficient performance of food preparation tasks. **Advanced Level** *Analysis:* Analyzes kitchen arrangements for efficiency, safety and convenience.	5.3 Students tour the food kitchens and observe the arrangement and location of equipment and supplies. Students respond to questions as: – what do you think are the reasons for the equipment being placed where it is? – why are the supplies located where they are? – students explain the meaning of "a place for everything and everything in its place." – what effect would having everything in its right place have upon use of time and energy? – would having all equipment and supplies in their right place have an effect on the finished food product?
5.31 When kitchen work centers are well planned, a contribution is made to effective food provision for individuals and families.	5.31 **Beginning Level** *Comprehension:* Explains factors to be considered in planning efficient kitchen work centers. **Intermediate Level** *Application:* Demonstrates ability to plan efficient work centers.	5.31 Working in groups, which are titled mixing center, sink center, range center, refrigerator center, and eating center, students use reference materials to define their specific work center, what equipment and supplies the center would house and what factors make their center efficient when providing food. Students share this information with the class.

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
5.23 Students review instruction manual for small appliance such as electric skillet and report the various ways it can be used as pan-broiling, deep fat frying, braising, baking, etc. Students identify ways small appliances can be used. * Students use small appliance in an unusual way to prepare a food product as: baking cake in electric skillet, mixing dough in blender, etc.	5.23 (See Intermediate Level.)
5.3 Students divided into groups go in the foods laboratories from which all equipment and supplies have been removed and placed on the counter space. Students are asked to replace all equipment and supplies in the kitchen using as a guideline for placement "efficient performance of food preparation tasks." Students list reasons why they placed the equipment and supplies where they did.	5.3 Students observe pictures of good and bad kitchen arrangements taken from magazines. Students analyze these arrangements for efficiency, safety and convenience.
5.31 Given a form with three divisions, food mixing center, sink center, and cooking and serving center and a list of common kitchen equipment, tools, food and supplies students list under each heading which center they would place the item in for a well-planned kitchen.	5.31 Using kitchen storage sense reference materials students devise guidelines for placement of equipment, food and supplies within the kitchen centers. After identifying guidelines, students discuss what contribution each guideline makes to effective food provision. – place items where first used – place where easily reached and seen – place according to weight, size, breakability, shape and use

Topical Outline

5.0 Factors Involved in Food Preparation
 5.31 Work Centers (Continued)
  5.311 Task Simplification
  5.312 Organization of Work Centers

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
	Advanced Level *Synthesis:* Devises guidelines for planning work centers.	
5.311 When task simplification techniques are applied, food preparation tasks may be simplified. Task simplification is the efficient use of time, energy and other resources to accomplish mental and physical jobs.	5.311 **Beginning Level** *Knowledge:* Defines work simplification. **Intermediate Level** *Application:* Demonstrates organizational procedures contributing to task simplification. **Advanced Level** *Analysis:* Determines ways task simplification contributes to effective use of resources.	5.311 Students read a case study about a tired, energyless working woman preparing a meal without trying to save her time, energy or even concerned for the end product. The preparation is described in detail. Students identify better ways of doing each task, share the information and from it draw a definition of task simplification.
5.312 When work centers, equipment and supplies are arranged according to specific tasks, a contribution is made to ease in food preparation.	5.312 **Beginning Level** *Comprehension:* Summarize factors to consider when arranging food, equipment and supplies in work centers in the kitchen. **Intermediate Level** *Application:* Applies task simplification techniques to the arrangement of food, supplies, and equipment in work centers in the kitchen. **Advanced Level** *Analysis:* Appraises kitchen work centers for efficiency in relation to task performance.	5.312 Using reference materials, old magazines and cardboard, students make mobiles with pictures showing arrangement of food, supplies and equipment and they develop titles for the pictures when arranging items within the centers. (If magazines are not availabel use titles only on mobiles or have students sketch.)

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
5.311 Students pantomine work simplification techniques. Class identify techniques and suggest situations in food preparation for their use.	5.311 Students prepare a simple meal in the foods lab. Students evaluate the actual preparation, sequence and steps involved. What task simplification techniques could have been used to make the meal preparation more efficient?
5.312 Study references for arrangement of equipment and supplies in work centers. Students working in the labs analyze the equipment and supplies and decide if any can be eliminated, combined, or rearranged for work simplification.	5.312 Students are given drawings of work centers that would be used for preparing, serving and cleaning. The drawings have no door or drawer fronts so that the food, supplies and equipment can be seen. Students are given a list of tasks to be performed and decide if the food, supplies and equipment are in the right location for efficiency. (Teachers when doing the drawings should have some items located in the wrong part of the center or incorrect center.)

Topical Outline
5.0 Factors Involved in Food Preparation
5.313 Kitchen Floor Plans
5.32 Storage

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.313 The basic shape or floor plan of the kitchen influences the location of work centers.	5.313 **Beginning Level** *Comprehension:* Explains the influence of kitchen shape on the arrangement of work centers. **Intermediate Level** *Analysis:* Analyzes the location of work centers in relation to kitchen shape. **Advanced Level** *Synthesis:* Plan the arrangement of work centers in various shaped kitchen.	5.313 Using transparancies of the U-shaped, two-wall, one-wall and L-shaped kitchens which show the placement of major equipment. The work triangle is drawn on each and students explain the relationship between the triangle and saving of time, steps and energy.
5.32 When equipment and supplies are stored for convenience, a contribution can be made to efficiency in performing food preparation tasks. When equipment and supplies are assembled before preparation begins a contributuion is made to food preparation efficiency.	5.32 **Beginning Level** *Comprehension:* Explains the relation between the storage location of equipment and supplies, and efficiency in food preparation. **Intermediate Level** *Application.* Stores equipment and supplies for efficient use in food preparation tasks. **Advanced Level** *Synthesis:* Assembles equipment and supplies for efficient use in food preparation tasks.	5.32 Students read and discuss "Be Your Own Handyman, Storage," Appendix A-30, or other reference material and respond to questions as: – What food, supplies and equipment have to be stored in a kitchen? – What are the guidelines for placing these items? – What are the results in the use of time and energy if the guidelines are not followed?

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
5.313 Students are given floor plans of different shaped kitchens. They identify various work centers in these kitchens. Students analyze location of work centers and determine if moving them on the floor plan would lead to a more efficient kitchen.	5.313 On graph paper draw a U, L, two-walled, and one-walled kitchen. Draw in the major equipment and label the work centers. Give the reasons for locating each work center where it was placed.
5.32 Series of Experiences 5.321–5.322	5.32 Given a recipe to prepare in the lab, students assemble the equipment and supplies needed for the preparation for the most efficient use.

Topical Outline
5.0 Factors Involved in Food Preparation
5.321 Equipment
5.322 Supplies

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.321 When kitchen equipment is stored where it is first or most frequently used, and items used together stored together, food preparation tasks may be performed with greater efficiency. – Use of space-saving devices and arrangements contribute to efficiency in food preparation tasks.	5.321 **Beginning Level** *Comprehension:* Cites examples of space saving arrangements and storage devices available for use in the kitchen. **Intermediate Level** *Application:* Demonstrates efficient storage of equipment and use of storage devices for the kitchen. **Advanced Level** *Synthesis:* Plans storage of equipment for a particular kitchen.	5.321 Students collect and bring to class pictures and articles from magazines, newspapers and advertisements containing ideas and arrangements for kitchen storage devices. Students share their gathered information with other class members.
5.322 When food is stored to retain nutrients and palatability, delay spoilage and for ease in food preparation, it affects the health of the family and the efficiency of food preparation.	5.322 **Beginning Level** *Knowledge:* Lists appropriate storage for various foods. **Intermediate Level** *Application:* Uses appropriate procedures for storing various kinds of foods. **Advanced Level** *Analysis:* Appraises storage of food for safety and efficiency.	5.322 Read and discuss the topic "Proper Storage Techniques Save Money and Food." Students view flash cards with various food items and list appropriate storage for each.

LEARNING EXPERIENCES

Intermediate Level

5.321 Students borrow from stores or bring from home commercial storage devices or they may make a storage device. They demonstrate to class members how these devices could be used for better storage of equipment and supplies in the kitchen.

Students using a teacher provided list of ways to improve storage of equipment in the kitchen, work in the lab to evaluate present placement of the equipment. Students make recommendations to leave items where located, move items, or eliminate items from the kitchen. Reasons are given for each decision.

5.322 Students take part in a food lab situation which requires two days of preparation. The students store the partially prepared products and the left over foods and supplies in proper containers and storage areas.

Advanced Level

5.321 Students are given cards which each list a piece of equipment used in the kitchen. While sitting where a lab kitchen can be viewed, they decide in what center and what shelf each item will be placed for greater efficiency. (Teacher has placed a number on each shelf and each drawer so the students can use this for ease of noting acceptable placement).

5.322 Studnets are supplied with samples of foods which have been improperly stored as: wilted lettuce, freezer burned meat, rancid butter, sour milk, corn meal with bugs, etc. Students determine what effect improper storage has on the safety and efficient use of the product. Students determine what proper storage should have been. (Samples of spoiled food may be available from your local supermarket.)

Topical Outline

5.0 Factors Involved in Food Preparation
5.33 Stationary Equipment
5.331 Use and Care
5.332 Selection

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.33 The use, care, selection and placement of stationary kitchen equipment affects the efficiency with which food preparation tasks are performed.	5.33 **Intermediate Level** *Application:* Relates food preparation tasks to the stationary equipment needed for them. **Advanced Level** *Analysis:* Determines factors relating to stationary equipment that influence efficiency in food preparation tasks. *Responding:* Volunteers to gather additional information related to stationary kitchen equipment.	5.33 Learning experiences are not appropriate at this level for this conceptual statement.
5.331 Using recommended methods in the operation and care of large equipment may save time, prevent accidents, prolong the life of the equipment and provide better service.	5.331 **Beginning Level** *Comprehension:* Explains proper use and care of large equipment. **Intermediate and Advance Levels** *Application:* Cares for large kitchen equipment according to recommended methods. **All Levels** *Manipulates:* Operates large equipment according to recommended methods.	5.331 Students observe demonstration on use and care of large kitchen equipment given by a home service representative from a utility company. Students write a use and care instruction booklet for one of the large pieces of equipment demonstrated.
5.332 The selection of large equipment is related to the family's needs, wants and resources.	5.332 **Intermediate Level** *Comprehension:* Summarizes the factors to be considered in the selection of large equipment.	5.332 Learning experiences are not appropriate at this level for the conceptual statement.

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
5.33 Students are assigned demonstrations of different processes which use stationary equipment. Students observe demonstrations for steps and motions to see if some can be eliminated, combined, done simpler, done in a different way or new order for their food preparation task.	5.33 Students conduct a time and motion study demonstrating the steps taken in preparing a simple meal and the kinds and number of motions made. Steps taken may be measured with yarn. After, discuss in class. – What effect did the placement of stationary equipment have on efficiency in food preparation? – Is the stationary equipment located in the best possible place in the kitchen? Why? – Is the stationary equipment too high or low?
5.331 Students use a variety of cleaning supplies and tools on the large kitchen equipment and respond to questions as: – Which supplies and equipment did the fastest job? – Which supplies and equipment produced the best results? – Can the same cleaning supplies be used on all the materials used in the construction of one piece of kitchen equipment? – Do all supplies and equipment used for cleaning require the same method? – Which method produces the best results?	5.331 (Same as Intermediate Level.)
5.332 Using mail-order catalogs, advertisements, and consumer research information in newspapers and information obtained in local stores, students determine factors to be considered in the selection of large kitchen equipment.	5.332 Students working in groups select one piece of large kitchen equipment for purchasing. They gather information necessary for making a wise selection. The group reports to the class which brand and model of kitchen equipment they would buy and the reasons for their choice.

Topical Outline

5.0 Factors Involved in Food Preparation
        5.332 Selection (Continued)
  5.4 Using Recipes
    5.41 Cooking Terms

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
	Advanced Level *Analysis:* Determines factors influencing selection of large kitchen equipment.	
5.4 Using recipes accurately with appropriate equipment contributes to satisfaction in food results.	5.4 **Beginning Level** *Comprehension:* Describes possible results of incorrect use of recipes. **Intermediate Level** *Application:* Uses recipes accurately. **Advanced Level** *Analysis:* Analyzes new recipes for food products. **All Levels** *Precision:* Measures ingredients for recipes accurately.	5.4 Students brainstorm for possible results of incorrect use of recipes. Students discuss food products they have eaten or seen that were not up to standard because the recipe was not followed. Students determine what might have caused the product to be substandard.
5.41 An understanding of cooking terms contributes to the effectiveness of their use.	5.41 **Beginning Level** *Comprehension:* Explains cooking terms. **Intermediate Level** *Application:* Demonstrates the meaning of cooking terms. **Advanced Level** *Analysis:* Analyzes the importance of knowing the meaning of cooking terms.	5.41 Students are given several recipes with a variety of cooking terms and explain what each term means. Cooking Terms Mystery game (Appendix A-33).

LEARNING EXPERIENCES

Intermediate Level

5.4 Students prepare a dish in foods lab and report on the quality of the finished product to the class. What part did the following of the recipe have to do with the end result?

5.41 Each student draws a slip of paper with a cooking term and is asked to research that term and bring to class the equipment, tool, and/or food product necessary to demonstrate the term to the class. Students compile a list of the terms and explanations for use.

Advanced Level

5.4 Students find a recipe in a magazine, newspaper or label that they believe to be reliable and evaluate it considering:

- proportions
- directions
- terms

Reasons are given for choosing the recipe they did.

5.41 Students view food products made by not using the cooking term correctly or by using another cooking term. (Example, muffins beaten with mixer instead of stirred, salad made with cut lettuce instead of torn.) Students answer questions as:

- Are there differences in the end product?
- Do the differences have an effect on taste, color, size, texture?
- Are the differences sometimes acceptable?
- Do the products sometimes not meet established standards?

Topical Outline

5.0 Factors Involved in Food Preparation
- 5.42 Measuring Ingredients
- 5.43 Equivalents and Substitutions
- 5.44 Altering Recipes

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.42 When ingredients are measured correctly, more accurate proportions are obtained contributing to acceptable results in food preparation.	5.42 **Beginning Level** *Comprehension:* Describes correct procedures for measuring various types of ingredients. **Intermediate Level** *Application:* Uses correct methods to measure various types of ingredients. **Advanced Level** *Precision:* Measures many types of ingredients accurately.	5.42 Students list all the equipment necessary for measuring basic ingredients used in food preparation. Teacher demonstrates measuring basic ingredients as: sugar, flour, baking powder, shortening, margarine, and liquids. Students draw sketches showing how to measure the ingredients above.
5.43 Knowledge of equivalent measures and common food substitutions contributes to flexibility in use of recipes.	5.43 **Beginning Level** *Knowledge:* Lists equivalent measures and common food substitutions. **Intermediate Level** *Application:* Employs equivalent measures and common food substitutes as needed.	5.43 Students read for information on equivalent measures and common food substitutions. Using a chart with measures and foods used, students fill in equivalent measures and common food substitutions.
5.44 Knowledge of ways to alter recipes may contribute to flexibility in food preparation.	5.44 **Intermediate Level** *Comprehension:* Illustrates alterations which may be made in a recipe. **Advanced Level** *Application:* Changes recipes to alter final product or to substitute ingredients.	5.44 Learning experiences are not appropriate for this conceptual statement.

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
5.42 Students working in pairs are provided a tray containing an assortment of dry ingredients, fats, and liquids. On each tray is a spatula, set of measuring spoons, liquid measuring cup and a set of graduated measuring cups. Students measure basic ingredients using varying amounts, such as 1 cup, 1/3 cup, 1/2 teaspoon. While one partner is measuring the other partner watches for mistakes.	5.42 Students divided into kitchen groups prepare two simple food products from the same recipe, one measured correctly and one measured incorrectly. Students observe results and draw generalizations about measuring ingredients accurately.
5.43 Students are given recipes and told that certain ingredients and measuring equipment are not available such as butter, baking powder, cream, tablespoon, one-fourth cup, etc. Using cookbooks, students determine what food substitutes or measuring equipment might be used in making the product.	5.43 Learning experience not appropriate.
5.44 Students are given a recipe for a casserole dish which lists noodles, milk, cheese, soup, salt, pepper. Using cookbooks, they develop as many varied casserole dishes as they can. Students in kitchen groups prepare the different varieties and evaluate.	5.44 Students prepare a cookie or muffin recipe with slight variations in added ingredients, flavoring or liquid. Students evaluate the various finished products at a testing table.

Topical Outline

5.0 Factors Involved in Food Preparation
  5.5 Customs for Eating
    5.51 Table Appointments and Setting

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.5 When an individual understands and uses appropriate food setting, serving and eating customs for a particular situation, acceptance in a group is more likely to be achieved.	5.5 **Beginning Level** *Comprehension:* Describes the effect of knowing appropriate eating customs in a particular situation. **Intermediate Level** *Application:* Uses appropriate food eating customs in a given situation. **Advanced Level** *Analysis:* Distinguishes between correct and incorrect eating customs. **All Levels** *Valuing:* Follows appropriate food customs for differing situations.	5.5 (Teacher prepares a table with an elaborate setting, using food models to illustrate a complicated menu.) Students are asked how they would feel if they were at a formal dinner or banquet and asked to eat this meal. What would they need to know to not be embarrassed and feel they were using appropriate manners?
5.51 The selection of table appointments and the arrangement of table settings is influenced by available resources, convenience for the eater, and what is valued in the culture. – Table appointments are related to the menu, the occasion, the style of table service and the available resources. – When table setting guidelines are applied, a contribution is made to convenience when eating.	5.51 **Beginning Level** *Comprehension:* Illustrates factors affecting selection and placement of table appointments. **Intermediate Level** *Application:* Uses information about table appointments and settings to arrange settings in different situations. **Advanced Level** *Synthesis:* Proposes a plan for the selection and placement of table appointments for various situations.	5.51 Students view a filmstrip or a demonstration of table settings including various types of appointments. Students give reasons for the placement of each item. Students tell why certain pieces may not be used at every meal. * Students find pictures illustrating placement of table appointments and evaluate, or students draw diagrams showing correct placement.

LEARNING EXPERIENCES

Intermediate Level

5.5 Students give examples of times when they felt embarrassed or rejected because they did not know the correct customs for eating.

Students view pictures or transparencies of someone using inappropriate eating customs and describe what is wrong.

* Students draw a card on which is described an eating, serving and/or table setting situation and demonstrate the accepted way of doing it. Examples: Eating soup, cutting meat, buttering bread, serving dessert.

5.51 Students devise table settings for various eating situations as a tea, buffet, breakfast, informal dinner, formal luncheon using a holiday theme.

* Students working in groups, demonstrate correct place setting for a specific menu. Students give ideas for varying this setting according to family resources and values.

Advanced Level

5.5 Students enact an eating situation in which one person doesn't use correct eating customs. Class notes all the mistakes made by the student using incorrect customs and determines what the correct way would be.

5.51 Students view a filmstrip or exhibit of table appointments that aid in setting a table attractively. A field trip to department store housewares section may be taken to observe variety of table appointments available. Students compare cost, quality and use of various types.

* Students select appropriate table appointments for various occasions and menus. Students suggest alternative items when one does not have needed items.
  - Students analyze problems which may occur in table setting as lack of needed table appointments, large number of people, limited budget.
  - Students suggest ways of solving problems of not enough placemats, too few glasses, etc.

* Students devise inexpensive and creative ways to provide table appointments.

Topical Outline

5.0 Factors Involved in Food Preparation
5.52 Style of Serving
5.53 Mealtime Manners
5.6 Principles and Procedures for Preparing Food and Food Products

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.52 Selection of a style of serving food is influenced by the facilities, type of menu, number and ages of people eating, and personnel available for serving.	5.52 **Beginning Level** *Comprehension:* Explains procedures for passing, serving and removing dishes. **Intermediate and Advanced Levels** *Application:* Selects appropriate style of table service in various situations.	5.52 Students observe a demonstration of procedures for serving food, passing food, removing dishes and serving dessert at an informal meal. * Students explain how to pass, serve oneself, and remove dishes from table for dessert.
5.53 Acceptable behavior for eating one's food differs from situation to situation and tends to change over time. Manners for eating are based on consideration for the feelings and the comfort of others.	5.53 **Beginning Level** *Comprehension:* Explains basic rules of customs for eating in this society. **Intermediate Level** *Application:* Uses acceptable behavior when eating. **All Levels** *Valuing:* Follows acceptable behavior when eating.	5.53 Students illustrate situations in which table manners were ignored and the effect on other diners. Students study references or observe a demonstration of basic rules of meal time manners. * Students make a list of the manners they consider most important and why they think each is important.
5.6 When the principles and procedures for food preparation are understood and applied, conservation of the nutritive value, improvement of digestibility, development and enhancement of flavor and attractiveness, and protection from spoilage can result.	5.6 **Beginning Level** *Application:* Uses principles of food preparation to prepare simple food products. **Intermediate Level** *Synthesis:* Prepares food products and combines them for an acceptable meal.	5.6 (Sequence of learning experiences, 5.61–5.613, are designed to achieve this objective.)

LEARNING EXPERIENCES

Intermediate Level

5.52 Students read references or hear illustrated talk about various styles of table service as family, American, etc.

Students are given examples of various situations as: family with small children, small dining area, large family, many guests for dinner. Students identify style of table service, advantages and disadvantages for each. Students describe effect of service on formality of occasion.

* Students set a table for a specific style of table service.

5.53 Students, in groups, demonstrate five rules of table manners. (Each group is to demonstrate different rules than the previous group.)

* In school cafeteria, laboratory classes and other social occasions, students are observed using correct table manners.

5.6 (Sequence of learning experiences, 5.61–5.613, are designed to achieve this objective.)

Advanced Level

5.52 Students view demonstration of how to serve food with various styles of table service. Students take part of guest, host, hostess for each style.

* Students demonstrate correct procedures for serving and removal of dishes for a particular style of table service.

5.53 (See Beginning and Intermediate Level.)

5.6 (Sequence of learning experiences, 5.61–5.613, are designed to achieve this objective.)

Topical Outline
5.0 Factors Involved in Food Preparation
5.6 Principles and Procedures for Preparing Food and Food Products (Continued)
5.61 Fruits and Vegetables
5.611 Raw

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	
	Advanced Level *Evaluation:* Appraises food products and meals for palatability and nutritive value. **All Levels** *Valuing:* Follows recommended principles and procedures in preparing food products.	**Beginning Level**
5.61 Using appropriate methods of preparation of fruits and vegetables will contribute to the retention of nutritive value and to palatability.	5.61–5.613 **Beginning and Intermediate Levels** *Application:* Uses principles of preparation of fruits and vegetables to retain nutritive value and enhance palatability. **Advanced Level** *Synthesis:* Create recipes for preparation of fruits and vegetables. **All Levels** *Valuing:* Selects ways of preparing fruits and vegetables which retain vitamins and minerals, and enhances palatability.	5.61 Students observe preparation of a relish tray including carrot curls, radish roses, celery fans, tomato wedges. Students list principles of nutrient retention and palatability appeal shown.
5.611 In the preparation of raw fruits and vegetables, the principles are related to: – color retention through prevention of oxidation – nutrient retention through appropriate procedures of chilling, paring and storage	5.611 (See objectives listed for 5.61.)	5.611 Students or teacher conduct the following experiment: Cut an apple into fourths. Allow one piece to set out all night uncovered. Wrap another in foil and the third in plastic wrap. Treat the fourth with lemon juice or other acid. Students compare pieces the next day for discoloration. Student groups prepare a fruit plate with orange

LEARNING EXPERIENCES

Intermediate Level

5.61 Students observe a display of a raw fruit and raw vegetable, and a cooked fruit and vegetable.

Students respond to questions as:
- In the preparation of raw fruits and vegetables, what are some ways to retain nutrients?
- How are they made more pleasing to the taste?
- What are some reasons for cooking fruits and vegetables?
- How may nutrients will be affected by the way fruits and vegetables are cooked?

5.611 Students prepare a variety of dips for a fresh vegetable platter: zucchini, turnips, celery, carrots, green pepper and cauliflower. Students review text or pamphlets on gelatin composition and preparation. Students choose a recipe for a vegetable or fruit gelatin salad and prepare. Students view a bulletin board illustrating fruit compotes and fruit whips. Students summarize the principles of fruit and vegetables preparation. Students select a recipe for preparation of either a fruit whip or fruit compote.

Advanced Level

5.61 (See Beginning or Intermediate Level.)

5.611 Students use references to find out about the variety of salad greens or view a display showing a number of them. Students compare two displays of salad greens–one wilted, unwashed, unattractive and the other fresh, crisp. Students demonstrate how to care for salad greens. Students create recipes for green salads using the following pattern: five greens, three vegetables, one protein (cheese, hard-cooked egg, salami) and liquid dressing.

Topical Outline
5.0 Factors Involved in Food Preparation
5.611 Raw (Continued)
5.612 Fruit Cookery
5.613 Vegetable Cookery

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
– palatability through combination of flavors and textures – attractiveness through combinations and arrangements of odors and shapes.		sections, banana slices, etc., to have experience in sectioning and preparation of various types of fruits. Stress the prevention of discoloring of fruit. * Students collect pictures of raw fruit and vegetable dishes that illustrate principles of their preparation.
5.612 Fruits are cooked to prevent spoilage, make them easier to eat and digest, to change flavor and add variety, and to combine them with other foods. – When fruit is cooked in water without sugar, the fruit may lose shape and break into pieces because the cellulose is softened. – When fruit is cooked in a sugar solution or syrup, the pieces of fruit tend to retain their original shape. – When fruits are cooked in their skins, they retain nutrients and natural flavor and add color.	5.612 (See objectives listed for 5.61.)	5.612 Students prepare a fruit by two methods: – cooking in water without adding sugar until the end of the cooking period – cooking in a sugar and water solution Students note which methods caused the fruit to loose its shape and which retained the original shape. Students tell what effect cooking fruits in their skins would have on retention of nutrients. * Students select a raw fruit to cook as apples, peaches. Students decide if they want it to retain its shape or become a sauce and choose an appropriate method.
5.613 The principles of vegetable cookery are related to obtaining the desired texture, flavor, and color as well as retaining the nutritive value. – Preferences of individuals for desired texture and flavor of vegetables differ.	5.613 (See objectives listed for 5.611.)	5.613 Students list all the vegetables they can think of on a blank sheet of paper or on the board and name three ways each can be prepared. Students taste carrots prepared in several different ways as: – cooked with no seasoning – cooked with seasoning

LEARNING EXPERIENCES

Intermediate Level

* Students complete an objective test on the principles of preparing raw fruits and vegetables.

5.612 Students taste dried fruit such as peaches, prunes, apricots, and then cook these food products. Students, using the finished product and reading the label on the package, determine if there has been a change in the flavor, color, texture, nutrients and shape.

5.613 Student groups conduct the following experiments:

- Cook two portions of frozen broccoli, brussel sprouts or cauliflower, one portion covered, another uncovered. Taste both. (Note: One without lid may taste milder since the sulfur in the vegetables were permitted to escape.)
- Cook one package of broccoli with lemon juice added. Cook another with water only. Compare color. (Note:

Advanced Level

* Students prepare and serve salads with crackers. Students evaluate result of recipe.

5.612 Students, working in groups, are each presented with a different kind of fruit which has started to spoil. Example: apples, bananas, peaches, strawberries. Using references and cookbooks, students determine an acceptable way to stop spoilage and prepare an acceptable fruit food product.

5.613 Students, working in kitchen groups, are each provided a different kind of vegetable as broccoli, tomatoes, green beans, etc. Students are instructed to prepare the vegetable in three different ways as: with a sauce, combined with other vegetables, unusual preparation method as boiled, baked, pressure cooked. Students share results with other class members at a tasting table.

Topical Outline
5.0 Factors Involved in Food Preparation
5.613 Vegetable Cookery (Continued)
5.62 Breads and Cereals

CONCEPTUAL STATEMENTS

- . cooking until "just done" yields a firm but tender product
  - . short cooking time minimizes flavor losses
- – Color changes in vegetables during cooking are the result of chemical changes.
- – Losses of water soluble minerals and vitamins (ascorbic acid, thiamine, and riboflavin) are minimized when vegetables are cooked:
  - . with little or no cut surface area
  - . in a small amount of water
  - . for a short period of time
- – Losses of water soluble nutrients are minimized when the water in which vegetables are cooked is consumed.

5.62 In the preparation of breads and cereal, the principles are related to the appearance, flavor and texture of the finished product.

STUDENT OBJECTIVES

5.62 **All Levels**
Application: Uses principles of preparing bread and cereal products to produce finished products with desired characteristics.

Valuing: Explains variations in finished products.

Beginning Level

- – glazed
- – broiled
- – juiced (in blender)
- – raw

Students indicate their preferences and why. Students review steps in cooking fresh, frozen and canned vegetables. Each student group selects a yellow vegetable, a green vegetable and a starchy vegetable and prepares a vegetable plate.

Teacher shows pictures or actual examples of some lesser known vegetables. Students indicate those which they have tasted.

* Student groups choose an unfamiliar vegetable and research cookbooks for a recipe. Prepare and serve a part of a buffet for class members to taste.

5.62 Students observe a display of bread and cereal products which included loaves of bread, rolls, rice, macaroni, ready-to-eat and partially prepared cereals. Students respond to question as, "What is the substance in each of these that must be cooked to improve palatability?"

LEARNING EXPERIENCES

Intermediate Level

Drab color when broccoli is cooked in acid solution.) Repeat with fresh, sliced beets. Compare color. Which method is best for each vegetable?

- Cook carrots in acid medium. Cook another pan in alkaline. (Note: Color pigment is not significantly changed in either medium.)
- Compare texture and flavor of a vegetable cooked the same length of time in a pan with and without a lid. Why is cooking time shortened with a lid?

Students combine vegetables they have cooked onto a testing table for all class members to taste.

* Student groups plan a meal to include previous experiences:
- main dish salad or vegetable plate
- hot bread
- fruit dessert

5.62 Students view a display of cereal grains or picture of them. Students describe the kinds of products that can be made from each grain. Students describe the qualities desired in finished bread and cereal products.

Advanced Level

5.62 (Sequence of learning experiences 5.621–5.622, are designed to achieve this objective.)

Topical Outline
5.0 Factors Involved in Food Preparation
5.621 Cereals and Pastas

CONCEPTUAL STATEMENTS

5.621 Cereals are cooked to improve digestibility, palatability, and texture.

- In the cooking process cereal grains absorb water, become softened, and lose their raw starchy taste.
- When large amounts of boiling water are used in cooking pastas, a tender product without pastiness results.
- When a starch, as cereal or cornstarch, is heated in a liquid, the starch particles absorb the liquid and swell, resulting in a thickening of the product.
- When starch is added to a hot liquid, it will lump unless an interfering agent as sugar, fat, or a small amount of cold water is added to separate the starch granules.
- When acids are cooked with a starch mixture, they have the effect of decreasing the thickening power of the starch.

STUDENT OBJECTIVES

5.621 **Beginning Level**
Application: Uses principles of cereal cookery to produce nutritious and tasty cereals.

Intermediate Level
Application: Uses principles of cooking with starch to produce pasta products of desired tenderness and texture.

Advanced Level
Application: Uses principles of cooking with starch to produce foods of desired tenderness and texture.

Beginning Level

5.621 Students cook a small amount of oatmeal or cornmeal and note what happens to the liquid.

Students taste uncooked rice and oatmeal, and give reasons for cooking it.

Students use an experiment to find out what happens when oatmeal is cooked according to directions and when it is not. One group cooks it according to directions, other groups vary in one of these ways:

- use ½ the amount of water
- use double the amount of water
- starting in cold water
- stirring throughout cooking

Students relate principles for cereal cookery to experiment.

* Students select a cereal as cream of wheat, oatmeal, farina, and prepare it. (Each group also prepares toast and juice.)

* Students investigate "natural" cereals and prepare them. Compare for flavor, cost, nutritive value, ease of preparation.

LEARNING EXPERIENCES

Intermediate Level

5.621 Students compare results when macaroni is cooked in different amounts of water and the cooking started at different temperatures as:

- large amount of boiling water
- small amount of boiling water
- large amount of cold water
- small amount of cold water

Students test macaroni at designated intervals for doneness. Students determine the characteristics of cooked macaroni and decide if it needs further treatment depending on recipe it is to be used in as macaroni and cheese, tuna and macaroni salad, macaroni-protein casserole.

* Students respond to questions as:

- When is macaroni rinsed with warm water?
- When is macaroni rinsed with cold water?
- Is macaroni ever not rinsed?

Students draw conclusions and check references for recommended methods of cooking pasta products.

* Students locate recipes and prepare a food using pasta products.

Advanced Level

5.621 Students observe the lumping and prevention of lumping of starch when mixed with hot liquid by using two methods of adding two tablespoons of cornstarch to one cup of boiling water:

- add dry cornstarch directly to boiling water
- mix cornstarch with small amount of cold water before adding to boiling water

Students compare texture of the thickened liquid; break open the cornstarch lumps to see what the inside is like; explain reasons for lumping; give other ways starch granules can be separated before they are added to hot liquid.

Students observe effect of an acid on the thickening ability of a starch by comparing the following methods:

- add two tablespoons of cornstarch to one cup of cold water; cook until thickened; add one tablespoon of lemon juice or vinegar
- add one tablespoon of vinegar or lemon juice to one cup of cold water; then add two tablespoons of cornstarch; cook until thickened

Students compare the two mixtures and draw conclusions.

* Students locate recipes using starch as a thickener and prepare products. Relate to principles of starch cookery.

Topical Outline

5.0 Factors Involved in Food Preparation
5.622 Baked Flour Mixtures
- Thin Batters
- Medium Batters

CONCEPTUAL STATEMENTS

5.622 When the principles of preparation of baked flour mixtures are understood, they can be used to produce a product with desired characteristics.

- In thin batters, the ratio of liquid to flour is high, preventing the formation of long gluten strands.

  When eggs are added to a thin batter, they provide an extensible protein to trap the steam within the gluten structure, resulting in a thin, tender shell as popovers or cream puffs.

- Medium batters contain a varying proportion of flour to liquid.

  When medium batters provide the proper proportion of various ingredients (sugar, shortening, egg yolks, and chocolate) to counteract the toughening or binding ingredients (flour, egg whites, and milk solids), the resulting product is fine textured and tender as in cakes.

- When the amount of flour is approximately twice that of

STUDENT OBJECTIVES

5.622 **Beginning Level**
Comprehension: Explains principles related to ingredients, manipulation and baking temperature in preparing medium and thick batters.

Intermediate Level
Application: Uses principles related to ingredients, manipulation and baking temperature in preparing thin batters and soft doughs.

Advanced Level
Analysis: Analyzes principles related to ingredients, manipulation and baking temperature in preparing pastries.

All Levels
Responding: Practices principles of preparation for baked flour mixtures outside of class.

Beginning Level

5.622 Students view pictures of well-prepared baked products and respond to question: "What will you need to know and do to make products of this quality?"

Students view filmstrip or demonstration on biscuits, muffins, or cookies. Students develop a chart comparing the ingredients in biscuits, muffins and cookies. Note similarities and differences in amounts, mixing procedures, baking.

Students read recipe for muffins or biscuits and review:
- measuring accurately
- order in which ingredients are added
- way batter should be manipulated
- how to fill the pans
- baking time and temperature

Students select either biscuit or muffins to prepare. Students test the importance of following directions by saving a portion of the batter to make one of the following changes:
- beating or kneading more or less than indicated in recipe
- baking at a much higher or lower temperature
- filling the pans considerably more

Students share results with class and explain effect of the change.

* Students prepare biscuits or muffins using a variation as adding nuts, raisins, dates, or changing shape.

Students view filmstrip, *Cooky Wise*, or observe a demonstration on two basic cooky doughs and the type of cookies made from them.

LEARNING EXPERIENCES

Intermediate Level

5.622 Students locate a recipe for popovers or cream puffs. Students discuss the effect of eggs in a thin batter. Students observe demonstration of preparation and baking of popovers or cream puffs, noting especially baking time and temperatures.

* Students prepare, serve and evaluate a product which has a thin batter. Students view pictures or actual products of a yeast bread and a quick bread, and a tray of the ingredients to make each. Students note which ingredients are the same and which differ.

To illustrate differences in the effect of ingredients, their manipulation and baking temperature, students observe the following:

- ways used to lighten the product:
  - chemical–place 1 teaspoon baking soda and 1 teaspoon vinegar or lemon juice in 1 cup warm water to note formation of carbon dioxide by baking soda in presence of acid and liquid
  - biological–place 1 cake of compressed yeast and 1 teaspoon of sugar in ¼ cup warm liquid to note formation of carbon dioxide by yeast and heat using sugar as a food
- ways of developing structure:
  - prepare and bake gluten balls of all purpose flour and of cake flour. (See Cronan and Atwood, pp. 136–137.)
- ways of manipulation of the product:
  - underline forms of manipulation in recipes for a cake, a quick bread and a yeast bread
  - demonstrate each form of manipulation and tell the purpose it serves
  - compare amount of manipulation and its purpose in the recipe
- ways of baking the product:
  - size and shape of pans

Advanced Level

5.622 Students review procedures for making pie crust noting techniques for cutting in shortening, rolling out crust, placing in pan and baking. Students note variety of dishes for which pie crust is used as meat pies, cobblers, tart shells. Students review various types of pies: fruit, cream, chiffon.

* Students select a recipe for a food using pie crust and prepare it. Evaluate.

Students play the game, "What If?" Given a recipe, the first person reads the ingredients substituting one or leaving one out. The other students describe the effect of the change. (Students study references to determine principles of baked product cookery that apply.) The next person may use same recipe leaving out or substituting a different ingredient. (Recipes may be written on chalkboard or transparency, covering omitted item.) In each case, determine the effect of the substitution or omission.

(Note to teacher: When teaching in an area where foods from various cultures are frequently used, adapt learning experiences to include demonstration and preparation of those foods.)

Topical Outline

5.0 Factors Involved in Food Preparation
5.622 Baked Flour Mixtures (Continued)
– Thick Batters
– Soft Dough
– Stiff Dough

CONCEPTUAL STATEMENTS

the liquid, the resulting mixture is a thick batter that drops from the spoon.

When a thick batter is slightly manipulated, an even-grained, coarse textured product as muffins results.

– A soft dough contains enough flour in ratio to the liquid so that the mixture can be kneaded and rolled.

When a soft dough is kneaded to strengthen the gluten and is leavened by means of carbon dioxide produced by yeast, the resulting product is soft with an even elastic crumb as in yeast bread.

– The ratio of flour to liquid in stiff dough is sufficient so that it is firm to the touch and can be rolled on a board.

When the appropriate ratio of fat to flour and amount and means of manipulation are used in a stiff dough, the resulting product is tender and flaky as in pastry.

STUDENT OBJECTIVES

Beginning Level

* Students prepare one type of cooky and evaluate their ability to use principles of preparation of thick batters.

Students compare recipes for cakes, waffles, pancakes with those for biscuits and muffins. Students rate the proportion of liquid to dry ingredients and decide if the batters are thick or medium.

Students view a demonstration of pancake and/or cake making. Students in groups, prepare cake or pancakes using a mix and from "scratch." Compare difference in results, cost, time to prepare. (See 5.651, Sugar Cookery for learning experiences relative to frostings.)

* Students, working in pairs, draw a recipe for a medium or thick batter product which is unnamed. Students decide what the product is. Prepare and evaluate results.

LEARNING EXPERIENCES

Intermediate Level

material of pans
baking time and temperature
fill of pans

Students observe demonstration of preparing yeast bread, noting especially preparation and addition of yeast, addition of flour, kneading, rising and shaping.

* Students prepare yeast breads. Evaluate.

Advanced Level

Topical Outline

5.0 Factors Involved in Food Preparation
    5.63 Milk and Milk Rich Foods
    5.64 Meat and Meat Products, Extenders and Substitutes

CONCEPTUAL STATEMENTS

5.63 The principles used in cooking milk and milk products are related to qualities desired in the finished product.

- A tender, non-stringy product will result when milk and cheese are cooked at a low temperature.
- When the proteins of milk and cheese are heated to a high temperature, they become tough and rubbery.
- When milk is agitated during heating, the film caused by evaporation as well as scorching will be prevented.
- When acid is stirred into milk slowly, it helps to prevent the acid from curdling the milk.

5.64 When *principles* of preparation of meat and meat products are applied, it is necessary to relate information about the kind and cut of the meat, and the effect of methods of cooking, to the finished product.

STUDENT OBJECTIVES

5.63 **Beginning Level**
Comprehension: Explains the relation between procedures used in cooking milk and milk products and the characteristics of the finished product.

Intermediate Level
Application: Applies principles used in cooking milk and milk products to produce a product with desired characteristics.

Advanced Level
Synthesis: Designs recipes using milk and milk products.

5.64 **Beginning Level**
Application: Uses principles of meat cookery preparing ground beef to produce a nutritious and palatable product.

Intermediate Level
Application: Uses principles of preparation of meat and meat products to produce products that are palatable, nutritious, and safe.

Advanced Level
Analysis: Determines correct method for cooking a particular cut of meat.

Beginning Level

5.63 Students observe an exhibit of various kinds of milk available, such as whole, skim, evaporated, sweetened, condensed, buttermilk, yogurt, dried. Students explore the nutritive value of each and suggest food products where each form might be used.

Students prepare whipped toppings using dried milk and evaporated milk.

Students observe group demonstrations of heating milk (for instant cocoa) by various methods, such as:

- low direct heat, no stirring
- low direct heat, stirring
- high direct heat, no stirring
- high direct heat, stirring
- heating in double boiler, stirring.

* Students examine product for film formed and for scorching and draw conclusions.

5.64 Students view filmstrip, *Ground Beef: Passport to Good Eating.*" Students share ideas on various ways ground beef may be prepared.

LEARNING EXPERIENCES

Intermediate Level

5.63 Students observe effect of melting cheese (on open-faced cheese sandwiches) at high and low temperatures, compare results, and draw conclusions.

Two students demonstrate stirring a small amount of acid (tomato juice) gradually into a large amount of milk versus adding a large amount of acid all at once. Students observe effect.

Students prepare product containing large amounts of milk or cheese such as pudding, custard, grilled cheese sandwich, pizza, cream soup. Students evaluate products for desired characteristics.*

5.64 (Sequence of learning experiences 5.641–5.643, are designed to achieve this objective.)

Advanced Level

5.63 Students watch a demonstration of various ways of preparing a cream sauce "scratch," using condensed soups, using dehydrated package, and opening prepared can.

* Students prepare a cream sauce to use with their choice of eggs, chipped beef, vegetables, or in a casserole. Students evaluate products for desired characteristics.

5.64 (Sequence of learning experiences 5.641–5.643, are designed to achieve this objective.)

Topical Outline
5.0 Factors Involved in Food Preparation
5.641 Principles of Meat Cookery
5.642 Meat Extenders and Substitutes

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	**Beginning Level**
5.641 Cooking meat and meat products at a lower temperature for a longer period of time results in more tenderness, less loss of fat and moisture, better retention of nutrients, more complete color change, and a greater number of harmful organisms destroyed. Cooking meat and meat products at high temperatures for a short period of time results in toughening of the protein, loss of fat and moisture affecting flavor, loss of nutrients, minimum of color changes and of organisms destroyed.	5.641 (See objectives for 5.64)	5.641 Students recall the many ways they have observed ground beef cooked, such as: broiled, fried, baked. Students identify which are cooked with dry heat and which with moist heat. Students explain why either may be used with ground beef. Students observe a demonstration of broiling various grades of ground beef, noting differences in amount of fat accumulated in the pan, juiciness, and flavor. Students decide what grade of ground beef would be best for various recipes.
5.642 When the flavor of meat is added to other foods, these foods become meat extenders.	5.642 **Beginning Level** *Comprehension:* Explains the use of meat extenders. **Intermediate Level** *Application:* Uses meat substitutes to prepare food products.	5.642 Students discuss ways of extending meat flavor through combining it with other foods. Students locate a recipe for a casserole dish and prepare it. Students evaluate results.

LEARNING EXPERIENCES

Intermediate Level

5.641 Students view filmstrip on beef, *How to Buy Beef*, or see exhibit of various cuts of beef, or take a field trip to grocery store to examine meat case for various cuts of meat.

(Teacher explains difference between dry and moist heat and the cuts of meat cooked by each.)

Students observe a demonstration of a less tender cut of meat cooked by broiling and an identical cut cooked by moist heat, cut the meat, and compare tenderness. Students explain ways of tenderizing less tender cuts of meat such as marinating, tenderizing by mechanical means, grinding, and chemicals.

* Given the name of a cut of meat, students explain the type of heat that should be used to cook it.

* Students draw the name of a cut of meat, locate a recipe using an appropriate method for cooking, and prepare. (One or two other foods may be added to make a simple meal.)

5.642 Students investigate to find out what food items can be used in place of meat as textured vegetable protein or engineered meats.

Students prepare some of the above items, if available, and evaluate for flavor, texture, acceptability.

Advanced Level

5.641 To review cuts of meat, students use cards with pictures of meat cuts.

Students observe demonstration or filmstrip showing the methods of cooking meat, such as: broiling, pan broiling, frying, braising, soup making, roasting. Students identify appropriate cuts of meat for each method.

* Students locate pictures of various cuts of meats and find recipes for preparing different cuts. Students analyze the method used in each recipe. Students select a recipe and prepare it.

Students prepare lamb, pork, chicken, or variety cuts.

5.642 (See Beginning or Intermediate Level.)

Topical Outline
5.0 Factors Involved in Food Preparation
5.643 Eggs
5.65 Other Foods

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.643 When eggs are cooked at a high temperature, the protein toughens. – The storage temperature of eggs affects the ease of separation of the white and yolk and the volume produced by beating. – low temperature for ease in separation. – warm temperature for higher volume by beating.	5.643 **Beginning and Intermediate Levels** *Application:* Uses principles of preparing eggs to produce finished products with desired characteristics.	5.643 Students observe the results when an egg is simmered at 185 degrees fahrenheit, and another boiled at 212 degrees fahrenheit. Students summarize the effect of heat on eggs, noting effect on white and yolk. Students view filmstrip, *Egg Basics.*" Students read directions for preparing eggs in a variety of ways as mentioned in the filmstrip. * Student groups (or teacher) demonstrate methods of preparing eggs to the class. * Student groups select a recipe which requires the use of one of the basic methods of egg preparation, prepare and serve it.
5.65 When the principals of cooking with sugar, fats and oils, and seasonings are applied, a more desirable product is likely to result.	5.65 **Beginning and Intermediate Levels** *Application:* Uses principles of cooking with sugar, fats and oils, and seasonings to prepare desired products.	5.65 (Sequence of learning experiences, 5.651–5.653, are designed to achieve these objectives.)

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
5.643 Students observe a demonstration of separating eggs at different temperatures: – one at room temperature – one at refrigerator temperature. Students observe a demonstration of the difference in volume of beaten egg white when the same amount of egg white is beaten at: – room temperature – refrigerator temperature. Students relate the principles of temperature for egg separation and beating to the preceding demonstration. Students review principles of egg cookery. Students observe demonstration of preparing an omelet, noting principles involved. * Students prepare fluffy omelet with cheese sauce or a cheese souffle. (Add salad and dessert for a simple meal.)	5.643 (See Beginning or Intermediate Level.)
5.65 (Sequence of learning experiences, 5.651–5.653, are designed to achieve these objectives.)	5.65 (Sequence of learning experiences, 5.651–5.653, are designed to achieve these objectives.)

Topical Outline
5.0 Factors Involved in Food Preparation
5.651 Sugar Cooking

CONCEPTUAL STATEMENTS

5.651 When the principles related to the use of sugar in food preparation are known and applied to a select group of foods, desired products are more likely to result.

- The type of product, crystalline or non-crystalline is determined by the ingredients used, degree of cooking, and concentration and manipulation during and after cooking.
- When conditions are controlled in such a manner that minute crystals are formed in recrystallization, the resulting product is smooth and creamy:
  - ingredients
  - degree of cooking and concentration
  - manipulation.
- When conditions are controlled in such a manner that no crystals are formed, the resulting product is amorphous or non-crystalline:
  - ingredients
  - degree of cooking and concentration
  - manipulation

STUDENT OBJECTIVES

5.651 **Beginning and Intermediate Levels**
Application: Applies principles of sugar cookery to prepare selected groups of food using sugar.

Advanced Level:
Synthesis: Creates cake decorations appropriate for various occasions.

Beginning Level

5.651 (Note: This learning experience may be taught with cake baking.) Students view filmstrip or observe demonstration of procedures for preparing frostings. Students investigate various ways frostings may be prepared, such as: from "scratch," a packaged mix, ready-prepared in a can. Each student group uses a different method to frost a cake, compare results for appearance, taste, cost, and time to prepare. Students review principles of sugar cookery, and prepare popcorn balls or other confections.

LEARNING EXPERIENCES

Intermediate Level

5.651 Students read references for information on crystalline and non-crystalline candies and find recipes for each type.

Students note differences in the degree of cooking and the manipulation during and after cooking.

* Students, in groups, make a crystalline and non-crystalline candy. Evaluate results.

Advanced Level

5.651 Students observe teacher or other resource person demonstrate cake decorating techniques. Students practice various cake decorating techniques.

* Students bake and decorate cakes using techniques previously learned.

Topical Outline
5.0 Factors Involved in Food Preparation
5.652 Fats and Oils
5.653 Seasonings

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.652 The principles of food preparation with fats and oils are related to their characteristics of oiliness, melting point, smoke point and solubility.	5.652 **Beginning Level** *Application:* Uses fats and oils to prepare various types of salad dressings. **Intermediate and Advanced Levels** *Analysis:* Distinguishes the effect on food products of various types of fats and oils and the methods of using them in food preparation.	5.652 Students observe a display of several types of salad dressings such as French, mayonnaise, cooked dressing. Students locate recipe for each type and compare ingredients and procedures for mixing, (OR) students observe a demonstration of preparation of each type of dressing. * Students select one type of dressing to prepare. Students share results at a tasting table. (Salads may be prepared to use in sampling dressings.)
5.653 Spices are used to enhance flavor, odor, and appearance of food.	5.653 **Beginning Level** *Comprehension:* Describes the influence of spices on palatability of food. **Intermediate and Advance Levels** *Application:* Uses spices appropriately to enhance flavor of foods.	5.653 Students view film, *A Grain of Salt* (Modern Talking Picture Service No. 3232). Students will summarize major points in film. Students will smell and taste a variety of spices. Students match spices with pictures of various foods in which they might be used. Students investigate sources of seasonings, spices, and condiments, and present information to the class. * Students select a spice and locate a recipe featuring it. Students prepare recipe, and summarize the effect of the spice on the product.

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
5.652 Students review various types of frying such as pan frying, oven frying, deep fat frying. Students in kitchen groups demonstrate one method of cooking with fat or oil. Students observe demonstration of french frying potatoes in oil, shortening, and butter and note difference in smoking point of the three types of fat. * Students select a food to be prepared using some method of frying. Evaluate results.	5.652 (See Intermediate Level.)
5.653 (Teacher prepares a display of spices that are less commonly known or used.) Students smell and taste spices. Dividing into groups, students investigate sources of one spice, kinds of dishes in which it might be used, and proportion needed. (If lab facilities are available, students might prepare a dish in which a particular spice is featured (Example: oregano, pizza; sage, stuffing; curry powder, rice curry; tarragon, salad dressing). * The student will taste pairs of food products and tell what makes them taste different (Example: baked custard with and without nutmeg; tomato meat mix with and without chili powder).	5.653 (See Intermediate Level.)

Topical Outline
5.0 Factors Involved in Food Preparation
5.7 Meal Planning
5.71 Food Patterns

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	**Beginning Level**
5.7 Meal planning involves consideration of nutritive needs, individual and family food preferences, patterns and life styles.	5.7 **Beginning Level** *Comprehension:* Explains factors influencing meal planning. **Intermediate Level** *Application:* Relates factors influencing meal planning to a specific situation. **Advanced Level** *Synthesis:* Plans meals and snacks through which a variety of individual and family needs can be met simultaneously. **All Levels** *Valuing:* Considers many factors in planning meals.	5.7 Students view pictures of a family with several children, an elderly person, a person sitting at a desk, an athlete, a couple with a small baby, people with small income. Students respond to questions, "Would the same meal be planned for each family or individual? What does a meal planner need to think about in developing menus?"
5.71 The *type of food pattern* used is affected by the foods available, the daily schedules of family members, amounts and types of activity of individuals and other cultural influences.	5.71 **All Levels** *Comprehension:* Illustrates a number of food patterns within our society. *Awareness:* Accepts the concept that individuals may vary in their meal patterns.	5.71 Teacher shows pictures of various societies where meal patterns vary. Students discuss variations in patterns and why these have developed. Students in small groups identify various patterns of meals within our society and how these relate to life styles.

LEARNING EXPERIENCES

	Intermediate Level		Advanced Level
5.7	Students brainstorm for factors to consider in planning meals such as: nutritional needs, time available, money available for food, food preferences, values, ability of food preparer, etc.	5.7	Students list ways meals may be planned, such as daily, weekly, monthly, or meal by meal. Advantages and disadvantages of each are cited.
*	Students give examples of how a designated factor such as limited time will affect meal planning.		Students plan menus for one week. Then, students evaluate menus in relation to needs of a specific family. What changes are necessary? Why?
5.71	Students list number of meals, snacks, etc., they eat during the day. Class then discusses what are the patterns in our society and how do they vary.	5.71	Students do research on varieties of food patterns in relation to nutritional adequacy. Questions to be answered may include: – Do several meals provide better nutritive value to the individual than three meals? – Are snacks harmful to the individual's nutritional patterns?
	Students identify what foods they might have for snacks and how they contribute to daily nutritional intake. Students respond to questions, "Must one eat three meals a day to have adequate nutrition? What might be some alternate patterns?"		

Topical Outline
5.0 Factors Involved in Food Preparation
5.711 Three Meals
5.712 Multiple Meal

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.711 Although throughout the world many food patterns exist, the three-meal pattern prevails with variations in our society. The three-meal-a-day pattern prevailed in our society based upon work and cultures of the majority group.	5.711 **Beginning Level** *Knowledge:* Identifies why our culture has mostly adopted the three-meal-a-day pattern. **Intermediate and Advanced Levels** *Comprehension:* Illustrates other societies where the three-meal-a-day pattern exists.	5.711 Students take an anonymous survey of class or student body to see how many people eat three meals a day. Students suggest reasons why this pattern may have developed in our society, such as: work schedules on farms, in offices, and some factories. Students describe changes they observe occurring in this pattern.
5.712 A variation to the three-meal-a-day pattern is a multiple meal pattern varying according to individual life styles.	5.712 **Beginning Level** *Knowledge:* Identifies various life styles within our society which create a need for multiple meal patterns. **Intermediate Level** *Application:* Collects information about meal patterns. **Advanced Level** *Synthesis:* Plans meals for a person who has a multiple meal pattern.	5.712 Students veiw pictures of people in various life style patterns including occupational, recreational, and family roles. Students identify how life patterns in each may create a variety of meal patterns. Students discuss why the truck driver may eat several small meals along his route. Students discuss other occasional roles where people eat several small meals rather than three large ones.

LEARNING EXPERIENCES

Intermediate Level

5.711 Students hear a person who has traveled to other parts of the world describe meal patterns observed in their travels. Students speculate as to why these patterns have occurred.

Students read references or talk to person from another culture to learn about societies which have varying meal patterns, report findings to class.

5.712 Students research various meal patterns:

- one group interviews neighbors to identify variations to three-meal pattern.
- Another group selects several food establishments in which to interveiw personnel about the time of day many people eat. Also, if possible, interview patrons in take-out restaurants, cafes, cafeterias, etc.

Advanced Level

5.711 Students are given a case study to analyze how they would solve a family's problems:

The Millers live in a home with many conveniences and appliances. Mary, the mother of children ages six, seven and ten, works as a jet mechanic during the week and finds it difficult to have the nutritional foods available that she and her children need. She is usually tired after her day's work and welcomes any kind of conveniences which are available. The children frequently snack on candy, cookies, and soda after school, until she reaches home.

Provide some alternatives for Mary in providing her children with adequate nutrition.

5.712 Students develop menus for the individual who will eat several times a day. Also, additional nutritional snacks are devised to supplement multiple meal patterns.

Topical Outline

5.0 Factors Involved in Food Preparation
5.713 Snacks
5.72 Sensory Appeal

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.713 Snacks contribute to total calorie and nutrient requirement for the day and satisfy psychological/physiological needs for some people.	5.713 **Beginning Level** *Application:* Determines ways nutritional snacks can be provided to meet individual patterns of living. **Intermediate Level** *Synthesis:* Plans nutritious snacks to meet individual and family nutritive needs. **Advanced Level** *Evaluation:* Compares nutritional value of various snacks.	5.713 Students, in small groups, brainstorm for snacks from each of the Basic Four Food Groups. Students then name snacks that do not fit into any group. Using nutritive value charts or comparison cards, students decide which would be most nutritious. * Students demonstrate the preparation of a snack from one of the four food groups.
5.72 When the characteristics of food, including color, flavor, texture, and aroma are considered, foods may be planned which have a great deal of sensory appeal to the individual.	5.72 **Beginning Level** *Comprehension:* Describes means of creating sensory appeal in foods. **Intermediate and Advanced Levels** *Application:* Applies knowledge of sensory appeal to total meal planning. *Awareness:* Accepts the concept of sensory appeal in food.	5.72 The teacher prepares two trays for students to observe and evaluate: – Tray 1 has most foods white in color, bland in flavor, and soft in texture. Example: – white bread and butter – macaroni and cheese – corn or wax beans – milk – vanilla ice cream. – Tray 2 has a variety in color, flavor, and texture. Example: – whole wheat or rye bread and butter – macaroni and cheese – green beans or peas or carrots – milk – red apple. Class discusses why one tray is more appealing than the other.

LEARNING EXPERIENCES

Intermediate Level

5.713 Two groups of students may be asked to prepare a display of foods for snacks. One group is asked to determine six nutritional snacks which might add up to the nutritive value of a meal. The other group selects popular snacks which are not of particular value in a daily diet.

Students discuss ways to change snack habits to include the nutrients individuals need.

* Students plan and prepare nutritious snacks to sell to the student body. (This may be a youth group activity.)
(Or)
Students plan and prepare nutritious snacks for their families.

5.72 Students describe foods that have sensory appeal, as cold, crisp apple; juicy, rare steak; hot, golden crusted biscuits. Students give examples of food used unnaturally such as over-use of food coloring, soggy crackers, unappealing combinations.

Students develop a menu by placing picture of various foods together on flannel or bulletin board.

Analyze which combinations are pleasing and which need some variations in color, texture, and flavor.

Which meals would appeal to individual families of students?

Why would some meals not appeal?

Advanced Level

5.713 Students are asked to compare several snacks for their nutritional value:
- ice cream
- popcorn
- soda
- apple
- cookies
- celery
- potato chips.

Students develop a bulletin board or posters showing pictures of "empty calorie" and nutritious snacks. Identify the nutrients supplied by each snack.

5.72 Students discuss how sensory appeal would vary among people of differing ages, physical capabilities, health, culture. (Example: children have higher sensitivity to strong flavors than adults.)

Students develop and prepare menus for a particular group, such as: preschool children, senior citizens, teenage party, handicapped, which have sensory appeal for that group.

Topical Outline

5.0 Factors Involved in Food Preparation
- 5.73 Eating Away from Home
- 5.74 Modifying Foods for Individual and Family Needs

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.73 Current life styles within our society dictate the need for a variety of food patterns including more frequent meals away from home. Meals away from home may or may not provide the nutritional value of menus at home.	5.73 **Beginning and Intermediate Levels** *Comprehension:* Explains how current life styles dictate more frequent meals away from home. Explains considerations in selecting a restaurant and in selecting items to order. **Advanced Level** Determines foods in a restaurant menu which would complete an individual's daily nutritive needs.	5.73 Students discuss various types of food establishments available within the community. A survey is made of the class to determine how frequently students desire to eat away from home other than at lunch. Students discuss how eating away from home relates to various life patterns.
5.74 When individuals' ages, activities, health problems, and occupations are considered, it may be necessary to modify menus.	5.74 **Beginning Level** *Knowledge:* Lists reasons why menus need to be modified. **Intermediate Level** *Comprehension:* Interprets individual food needs which dictate variation in menu planning. **Advanced Level** *Application:* Applies individual needs information in planning family menus.	5.74 Students are shown pictures of the following: a baby, a fat person, a young athlete, a nursing mother. Students respond to question, "If one of these people were a member of your family, how would menus need to be changed? Why?"

LEARNING EXPERIENCES

Intermediate Level

5.73 Students respond to statements such as:

"People decide to eat a meal away from home because ________."

"I do (do not) like to eat out because ________."

Students discuss factors to consider in selecting a restaurant.

Students recall the last time they visited a restaurant and explain why they selected a particular food item. Students discuss the relationship between items selected in eating out and one's total daily food intake.

5.74 Students are given three foods and asked to identify ways each could be prepared for various members of a family including a baby, a teenager who is engaged in athletics, a mother, father, and grandmother who no longer has teeth. (Example: Roast beef, green beans, and apples.)

Students make a chart of family meals at home and away from home and then determine how to plan adequate nutrition for family using this information.

Advanced Level

5.73 Students or teacher bring menus from various restaurants to class. Students compare choices available and cost. Which foods sound most appetizing? Are there foods listed which are unfamiliar?

Students complete a quiz or crossword puzzle to check understanding of meaning of special words used on restaurant menus.

Students list foods they have eaten for breakfast and lunch. Students determine what foods they would need to select from a menu to have adequate nutrition for the day.

5.74 Students cite examples of ways regular menus can be changed to meet needs of individuals. (Example: blender for liquid diet, smaller servings for weight control.)

Students, by group, are asked to make a "family" composition with activities. Students then develop three days of menus for their family. One meal is then prepared and evaluated.

Topical Outline

5.0 Factors Involved in Food Preparation
5.741 Age Groups
5.742 Health Problems

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.741 Nutritional needs vary throughout the life cycle as the progress of growth and development changes. Nutritional needs of young children and infants are critical for physical and mental health throughout life. Nutritional habits, though primarily established during preschool years, are modified during elementary and secondary school years as outside environment influences are felt. During adulthood, nutritional needs may be modified as pregnancy and other changes take place. During retirement and later life, a reduced intake of calories is required for adequate nutritional needs. Foods may be modified for physical and health reasons.	5.741 **Beginning Level** *Comprehension:* States several ways in which a person changes during his lifetime, and correspondingly his nutritional needs. **Intermediate Level** *Comprehension:* Explains the factors influencing nutritional needs of various portions of the life cycle. **Advanced Level** *Application:* Finds solutions for nutritional problems as they relate to various portions of the life cycle.	5.741 Students are asked to tell about their families and what they eat. Do they all eat similar or the same foods? Do they eat equal amounts? Does illness of family members change their meal pattern? Are there babies or elderly people in the family, and how does this change the use of raw foods in the menu? Students plan and prepare a simple meal for a family with a toddler or with an elderly person who cannot eat spicy or fatty foods.
5.742 When special health needs of family members are identified, menu planning may be slightly modified, to include all individuals' needs. Examples of special needs include: – heart patient – diabetic – ulcer patient.	5.742 **Advanced Level** *Application:* Solves problems in relation to modification of normal family diets for special needs.	5.742 (Learning experiences for this conceptual statement are not appropriate at this level.)

LEARNING EXPERIENCES

Intermediate Level

5.741 Students are given a copy of the family life cycle on which they are asked to write the general activities of that period.

Students then discuss how needs vary according to each portion of the life cycle and the activities which take place.

Given a sample menu, students illustrate how to adapt it to meet individual and family needs such as: elderly person who has difficulty chewing, a family member who cannot eat particular foods, teenage boy who is an athlete.

5.742 (Learning experiences for this conceptual statement are not appropriate at this level.)

Advanced Level

5.741 Students are given the following situations for which to find solutions for providing meals:

- The family is composed of Mary Jane, three years old, Dan, fourteen, mother who is pregnant, father with an ulcer problem, grandma and grandpa who are in their seventies;
- The family is composed of twenty-two-year-old Jane who is single, Bob and Billy who are her sixteen-year-old twin brothers, and a housekeeper;
- The family is composed of Martha, divorced, with two children eight and ten. Martha has two jobs to maintain her family and finds little time and money to handle the situation. Her teenage babysitter is not very reliable either.

Students apply knowledge of nutrition required for various portions of the life cycle to the foregoing situations in planning.

5.742 In the following situations students identify ways menus would need to be changed:

- Tonsillectomy – soft foods required
- Gall bladder attack – fat content reduced
- Allergies – eliminate foods which irritate the symptoms
- Dental extractions – soft foods.

How could normal menus for the remainder of the family be modified to include these variations?

Topical Outline
5.0 Factors Involved in Food Preparation
5.743 Multi-role Families
5.744 Emergency Situations

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.743 When the members of a family carry more than one role, variations in menu planning may be necessary. When a family member in the household carries the responsibility of preparing the family meals and works, more convenience foods and other substitutions may be considered.	5.743 **Intermediate Level** *Comprehension:* Describes factors involved in food preparation in multi-role families. **Advanced Level** *Applications:* Chooses appropriate procedures in meal planning to counteract the time and energy problems of the working family member responsible for meal preparation.	5.743 (Learning experiences for this conceptual statement are not appropriate at this level.)
5.744 During an emergency situation, the nutritional needs of family members may be met through use of a planned emergency food supply.	5.744 **Beginning Level** *Comprehension:* Describes kinds of foods needed in an emergency food supply. **Intermediate Level** *Application:* Cites examples of foods and equipment which may be included in an emergency. **Advanced Level** *Synthesis:* Plans and prepares a meal using emergency food supplies. **All Levels** *Responding:* Volunteers to obtain information about emergency food supplies.	5.744 Students name some major emergency situations which may make it difficult to have meals: power failure, tornado, a flood. What would be the effect of the situation on preparing meals? Students review resources and identify items which may be kept in an emergency food supply. Students describe characteristics these foods should have as: easily stored, refrigeration not needed, no further preparation necessary. How often should the emergency food supply be restocked?

LEARNING EXPERIENCES

Intermediate Level

5.743 Students brainstorm for shortcut in food preparation which would aid a person having multi-roles. Suggestions might be use of convenience foods, special equipment.

Students interview working women to learn their short-cut methods in food preparation. Suggestions are compiled in a booklet.

Students develop possible solution that may arise in a multi-role situation. Example: The food preparer does not arrive home from work until 5:30. Another family member needs to leave in 45 minutes for a meeting. The menu planned requires more time than that to prepare. How should the situation be handled? Students brainstorm for ideas, considering factors affecting each.

Student groups prepare "broomstick movies" on ways a person with multi-roles may use available time and energy in solving meal management problems. (Broomstick movies are drawn on a scroll and turned by use of broomstick or rollers.)

5.744 Students interview individuals who have experienced an emergency which affected food preparation.

Students observe a demonstration of ways to purify water.

Through the Red Cross, Civil Defense, or other agencies, students obtain information on providing food in an emergency.

Students develop suggestions for equipment which may be used for food preparation during emergencies such as camping equipment, ice chest for frozen storage.

Students give examples of the food items and the quantity they would store in the event of a disaster.

Advanced Level

5.743 Students examine the following case study and make recommendations:

> The Joneses are a very busy family with mother, dad, Susan, and Jeff all working. The younger children are six and seven and very busy with swimming, bicycling, and playing.
>
> Mrs. Jones received a call from the plant late one evening asking that she report for the evening shift at 4:00 p.m. for the next week. Mr. Jones works the day shift. Susan works a split shift at a local restaurant. The problem now will be in determining how not only time will be redivided but also who will prepare the meals and how can time in preparation be cut down.

Consider the following possibilities:

> Could more than one person make the meals or even a meal? What advanced preparation could be made so that at meal time only heating and serving is necessary? How could freezer meals, microwave oven, and crockpots be utilized?

5.744 Students role play how they would provide food if all water and electricity were non-existent for 36 hours due to a natural disaster. Students summarize food and equipment available, how to preserve and/or keep foods sanitary, in what order the food supply might be used and served.

Students make posters or displays showing ways meals may be provided in a community disaster: mobile unit, indoor shelter, outdoor feeding in tents and field kitchen, helicopter drops.

Students plan and prepare a meal from a list of emergency food supplies.

Topical Outline

5.0 Factors Involved in Food Preparation
    5.75 Leftovers
    5.76 Meal Planning Tools
  5.8 Preparing and Serving Meals and Snacks

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.75 Leftovers can provide an opportunity to be creative as well as economical.	5.75 **Intermediate and Advanced Levels** *Application:* Chooses appropriate ways of preparing leftovers creatively.	5.75 (Learning experiences not appropriate for this conceptual statement at this level.)
5.76 When planning family meals, certain tools are available as assistance. – newspaper ads and articles – magazine articles and menu guides – family likes and dislikes – recipe books with menu planners – Basic Four Food Guide	5.76 **Beginning Level** *Comprehension:* Describes a variety of tools for assistance in menu planning. **Intermediate Level** *Application:* Applies the tools for assistance in menu planning to family meal situations. **Advanced Level** *Analysis*: Organizes menu patterns for a period of one week, using the basic tools of assistance.	5.76 Students examine several items on display as menu tools. Students list ways in which each tool may be used. Class discusses lists together. * Students select one meal planning tool and illustrate how it could be used to plan menus.
5.8 Application of nutrition and food preparation principles contributes to attractive and nourishing meals.	5.8 **Beginning Level** *Comprehension:* Describes effect of using nutrition and food preparation principles in meal preparation. **Intermediate Level.** *Analysis:* Criticizes meal planning and preparation procedures in relation to nutrition and food preparation principles.	5.8 Students are divided into two groups. One group prepares a snack without any further instructions. The second group discusses what errors were made in terms of nutrition and food preparation principles. * Students describe how use of nutrition and food preparation principles could have improved the lab.

LEARNING EXPERIENCES

Intermediate Level

5.75 Students first discuss and show pictures of ways leftovers may be prepared. A lab is then developed to experiment with leftovers of the following foods: roast beef, corn, peas, stale bread, canned peaches, mashed potatoes, vegetable soup, lettuce and tomato salad.

Students judge products on eye appeal, palatability, and economy.

5.76* Students are given one of the following situations for which to plan:

- a family dinner
- a family picnic
- a party
- a quick meal
- a picnic
- a low-cost meal

Students share meal plans and indicate what meal planning tools were used in the planning.

5.8 Students plan a menu for a snack party and prepare a grocery order. Students plan a time schedule and assign duties to each person. Students prepare, serve, and eat snack.

* Following laboratory experience, students analyze menu, techniques in preparation, and serving suggestions are made for improvement in the next lab experience.

Advanced Level

5.75 (See Intermediate Level.)

5.76* Students are provided a case study of a family for which to plan menus for a week. Information about the family includes:

- income and budget
- number and ages
- health problems
- cultural background
- individual likes and dislikes

Students are also given newspaper ads for specials, magazine articles and charts of the Basic Four Food groups to use in planning.

Students plan menus and analyze in relation to family characteristics. Students relate the use of menu planning tools in helping to develop menus.

5.8 (See Intermediate Level.)

Topical Outline

- 5.0 Factors Involved in Food Preparation
  - 5.8 Preparing and Serving Meals and Snacks (Continued)
    - 5.81 Efficient Use of Resources
      - 5.811 Time Saving Techniques

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
	All Levels *Responding:* Participates in preparing and serving of meals in food laboratory.	
5.81 When the resources for meal preparation are understood, they may be more efficiently used.	5.81 **Beginning Level** *Knowledge:* Identifies resources one may have available for meal preparation.	5.81 Students list resources for meal preparation as time, money, energy, skills, equipment. Students ask parents and other homemakers for ways they manage these resources. Example: doubling recipe and freezing half, oven meals, convenience foods.
	Intermediate Level *Analysis:* Analyzes time schedules for meal preparation in relation to time needed.	* Given a resource such as skill in preparing quick breads, students tell how this could influence meal preparation.
	Advanced Level *Evaluation:* Assesses time schedules for meal preparation in relation to resources available.	
5.811 Time saving techniques in food preparation may be developed to aid a person who prepares meals.	5.811 **Beginning Level** *Comprehension:* Gives examples of time saving techniques in meal preparation.	5.811 Students name some disliked food preparation tasks and why. Other students brainstorm for ways to make it more interesting and less time consuming.
	Intermediate Level *Application:* Uses time saving procedures in meal preparation.	Students observe demonstration by teacher or utility company representative of time saving techniques in food preparation as: using both hands, keeping work space orderly, using appropriate tool.
	Advanced Level *Synthesis:* Proposes time saving techniques in meal preparation.	* Students make posters to illustrate a time saving technique in meal preparation. Posters are placed on bulletin boards in laboratory area as reminders.

LEARNING EXPERIENCES

Intermediate Level	Advanced Level
5.81 Students are given a sample menu indicating the cooking time for each item and the time the meal is to be ready. Students develop a time schedule for preparing the meal indicating the order in which they would perform each task. Students discuss how resources for food preparation are interrelated. Example: time available affects equipment used and money spent in food preparation.	5.81 Students are given a dinner menu for which they are to plan a time schedule for preparing, serving, and cleaning up. Students identify which jobs will require the greatest amount of time including preparation and cooking. Students will indicate the time they will need to begin each task to have the meal ready at the designated hour. Tasks to be dovetailed and items to be partially prepared ahead of time are identified. * Students prepare meal and evaluate their time schedule identifying changes needed.
5.811 Students watch a worker for use of time saving techniques as number of trips to refrigerator, dovetailing tasks, putting away items as used. Students play "Add-on-Gossip" using descriptions of time saving techniques in meal preparation. (Directions: Students sit in a circle. The first player gives a time saving idea, the next repeats the idea and adds one of his own. Continue around the circle repeating all previous statements and adding a new one with each player.) * Students demonstrate a situation of someone preparing a meal without organization of equipment or procedures. Another student replays situation using principles of organization.	5.811 Students study case history in which a young person or couple have moved into housing which has a very inconvenient kitchen with limited cabinet space and work areas. Without major remodeling and a small amount of money, what techniques could be used to save time in meal preparation?

Topical Outline
5.0 Factors Involved in Food Preparation
5.812 Convenience Foods
5.82 Meals for Special Occasions
5.821 Holidays

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.812 Convenience foods may provide savings in energy and time during meal preparation and may or may not be more expensive than food entirely prepared at home.	5.812 **Beginning Level** *Knowledge:* Defines and names various convenience foods. **Intermediate Level** *Synthesis:* Plans and prepares convenience foods creatively. **Advanced Level** *Evaluation:* Compares convenience and non-convenience foods for cost, preparation time, and palatability.	5.812 Students list as many convenience foods as they can think of in three minutes. From this list, students formulate a definition of convenience foods. * Students give advantages and disadvantages of using convenience foods.
5.82 Knowledge of basic meal planning, preparation and serving principles contributes to one's ability to provide meals for special occasions.	5.82 **Beginning Level.** *Comprehension:* Describes differences in preparing everyday family meals and special occasion meals. **Intermediate Level** *Application:* Applies information about planning meals for special occasions in reviewing suggested menus. **Advanced Level** *Synthesis:* Plans and prepares meals for special occasions.	5.82 Students name special occasions at which food was served: birthday party, wedding, christening. Students describe the foods that were served. Were any unusual foods served or served in unusual ways? Are there some occasions at which only certain foods are thought to be appropriate? Students describe differences in planning, preparing, and serving meals for special meals and for regular family meals. * Students summarize steps in preparing a special occasion meal.
5.821 When holiday events are being observed, factors to consider in menu planning may include the holiday, the number and ages of people, the budget, the cultural preferences, and the available table service.	5.821 **Intermediate Level** *Analysis:* Organizes a holiday menu for a given budget and group of people.	5.821 (See Intermediate Level.)

LEARNING EXPERIENCES

Intermediate Level

5.812 Students investigate cookbooks, pamphlets, and magazines to locate recipes using convenience foods. Students share ideas of using convenience foods in a creative way.

* Students plan and prepare a simple meal using at least two convenience foods in a creative way.

5.82 Students give examples of factors to consider when planning food for special occasions as: number of people, type of party, cost, site of party, assistance available.

* Students examine a menu suggested for a special occasion. Is the menu nutritionally adequate and pleasing to the senses? Is it appropriate for the occasion? Is it appropriate for the cost, facilities, number of people?

5.821 Students discuss customs in their family for several holidays such as Thanksgiving, New Year's, Christmas, etc. Students then plan a menu for the nearest holiday for lab unit and two guests. A budget is established for food and decorations. Consideration also may need to be given to the type of table service available. Students may evaluate the meal (above) by using the following criteria:

- Did menu fit holiday?

Advanced Level

5.812 Students compare five brands of particular convenience foods rating cost, appearance, taste, and nutritive value.

* Students prepare a simple menu using convenience foods and a similar menu with non-convenience foods. Students use a chart to compare preparation time, appearances, flavor, cost, and amount. (See Appendix, p. A-34.)

5.82 Students in groups plan a menu for a special occasion using a specified amount of money. The food, decorating, location, number of people should be included. Plans are shared with rest of class and students vote on 2–3 parties which would probably be most successful. Students find out if facilities are available for renting glassware, linens, and other equipment for special occasions.

* Students plan and prepare a meal for a special occasion. Evaluate.

5.821 (See Intermediate Level.)

Topical Outline

5.0 Factors Involved in Food Preparation
- 5.821 Holidays (Continued)
- 5.822 Parties
- 5.823 Camping, Cookouts, and Picnics

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.822 Party foods provide an opportunity to be creative. Consideration may be given to number and ages of individuals, occasion, and budget.	5.822 **Beginning Level** *Application:* Constructs a menu for a party for a specified purpose. **Intermediate and Advanced Levels** *Synthesis:* Plans and prepares a party for a particular group of people.	5.822 Students plan party menu to be served to friends. Emphasis is placed upon nutritious desserts rather than empty calorie choices. Students may consider the following in planning: – cost – purpose of party – invitation and decorations – simple menu
5.823 When foods are being planned for picnics and camping, spoilage prevention and preparation needed are factors to consider. Opportunities for variety in mealtime atmosphere as well as cooking methods are afforded with picnics, camping, and barbecuing.	5.823 **Beginning and Intermediate Levels** *Application:* Applies information about outdoor foods to a given situation. **Advanced Level** *Analysis:* Appraises and organizes a basic camp menu and cooking equipment for a designated period.	5.823 Students hear Boy Scout tell about food preparation outdoors. He may be asked to discuss with the class equipment provisions, basic outdoor food preparation, and safety. Students prepare a few simple foods over outdoor grill. A picnic may be planned and carried out. (See May/June 1973 *What's New in Home Economics,* article entitled "The Outdoor Primer.")

LEARNING EXPERIENCES

Intermediate Level

- Did menu fit within budget?
- Did people for whom menu was planned enjoy the occasion?
- Were some items planned and prepared ahead of time to eliminate rush?
- Were decorations interesting and did they make the meal more interesting?

5.822 (See Beginning or Intermediate Level.)

5.823 Students take a field trip to the grocery store to observe available food products for outdoor cookery, the wrapping conveniences, the cooking and storage equipment.

Students develop a list of items which are essential:
- when camping
- when cooking outdoors

Students plan an outdoor meal utilizing several pieces of equipment and methods of cooking.

* Students examine a list of food and equipment needed for a three-day period and decide if any needed items are omitted, or if unneccesary items are included.

Advanced Level

5.822 Students plan for a special party for children, parents, or elderly people. Students consider factors relating to age, cost, location, and occasion. Committees for various tasks are organized: invitation, decorations, menu, preparing foods, entertainment, hostess clean-up.

Students prepare party and evaluate. (This may be an activity for FHA-HERO.)

5.823 Students are placed in groups as "families" and asked to assess a set of plans for camping for one week. Students will utilize all resource material possible to analyze meals, storage and food preparation methods.

Students also will examine plans in case of the following:
- electricity fails in camper
- ice in ice chest melts earlier than expected
- matches for the campfire were forgotten

Topical Outline

5.0 Factors Involved in Food Preparation
        5.83 International and Regional Foods
    5.9 Food Preservation

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.83 International and regional food cookery provides an opportunity to explore a variety of cultural food patterns and preferences, preparation techniques and equipment.	5.83 **Beginning Level** *Application:* Demonstrates ability to plan, prepare and serve food typical of a region of the United States. **Intermediate Level** *Analysis:* Organizes a menu for at least one foreign country. Discusses ideas about one foreign culture in relation to foods being prepared. **Advanced Level** *Evaluation:* Compares procedures for foreign food preparation with common food preparation in this country.	5.83 Students from various areas of the U.S. identify foods associated with a particular area: clam chowder – New England; black-eyed peas – South; barbecued meat and Mexican dishes – Southwest, etc. Students examine cookbooks to locate recipes for dishes representative of a particular region. * Students prepare foods representative of a particular region.
5.9 When principles of food preservation by different processes are applied, the possibility of variety in the diet as well as convenience and economy in meal preparation is increased without sacrificing quality and nutritive value. Choices of preserved foods are based on the end use of the product, relative cost, storage facilities, and personal preferences.	5.9 **Intermediate Level** *Comprehension:* Explains the factors affecting decisions to preserve food at home. **Advanced Level** *Analysis:* Analyzes factors affecting home preservation of food.	5.9 (Learning experiences are not appropriate for this conceptual statement at this level.)

LEARNING EXPERIENCES

Intermediate Level

5.83 Students select and study the culture and food customs of at least one foreign country. Students then present reports to class and demonstrate one dish popular from the country.

A foreign foods dinner or buffet may then be planned for guests. Table settings may be in the mode of the country, and students dress in costumes representative of the country. A little story about the foods of each country may be placed on the table.

5.9 Students brainstorm for ways to preserve food. Students give reasons for preserving food as:

- storing for later use
- keep from spoiling
- keep food palatable

Students discuss advantages and disadvantages of home preservation of food.

* Students summarize reasons for preserving foods at home.

Advanced Level

5.83 Students compare the techniques used in preparing foreign foods and commonly eaten foods in the U.S. Students point out special techniques and equipment used and their relationship to the product Students conclude ways foreign foods may be adapted to food preparation techniques, equipment, ingredients and flavorings available in this country.

5.9 Students observe a display of food which may be preserved at home. Students locate recipes for these foods. Students discuss what factors may have influenced the following statements:

- "I prefer to preserve most of my fruits, vegetables, and jellies at home."
- "I believe in using only commercially processed foods."
- "Home preservation of food by canning saves money in my food budget."

* Students analyze factors that influence successful food preservation at home.

Topical Outline
5.0 Factors Involved in Food Preparation
5.91 Freezing

CONCEPTUAL STATEMENTS

5.91 **Freezing** (lowering temperature) prevents and/or retards growth of microorganisms and enzyme action. When the homemaker applies principles controlling the growth of spoilage agents by the use of **low temperature or freezing** to preserving foods for future use, provision and preparation of food for meals may be facilitated.

- selection of product for freezing
- preparation of product for freezing
- selection of containers
- placement of food in containers
- freezing
- storing the frozen product
- using in meals

STUDENT OBJECTIVES

5.91 **Intermediate Level**
Application: Uses scientific principles as a basis for techniques in preserving food through lowering temperature.

Beginning Level

5.91 (Learning experiences are not appropriate for this conceptual statement at this level.)

LEARNING EXPERIENCES

Intermediate Level

5.91 Students observe demonstration by a resource person on freezing foods. Students summarize principles of freezing as they apply to meat, vegetables, fruit. Student groups prepare food for freezing such as chicken, green beans or corn, peaches or strawberries. Students analyze results and suggest how the food might be used in meals.

Advanced Level

5.91–5.94 Students read references to find out factors that influence successful preservation of food such as:

- appropriate method for type of food
- appropriate equipment for each method and quality of food
- selection of high quality foods
- processing to maintain nutritional quality of food

Students divide into groups to investigate a particular method as:

- drying or dehydration
- salt and hot water bath
- sugar and syrup preservation
- freezing
- canning
- pickling

Students report findings to class through displays of items of equipment needed and demonstrations of procedures, or through picture displays illustrating procedures.

* Students, in groups, demonstrate one method to the class.

Students are given the name of a food item and determine what would be appropriate method(s) of preservation. Students, in groups, use one method of preserving food and share results with class.

* Students play a game in which one person describes a basic step in food preservation. Another student then names the method using this step or activity.

* Students complete a crossword puzzle using food preservation terms.

Topical Outline
5.0 Factors Involved in Food Preparation
5.92 Canning
5.93 Chemicals

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
5.92 **Heat sterilizing** destroys the microorganisms, inactiviates the enzymes, and cooks the food. When principles of **heat sterilization** are applied to food preservation by **canning**, food products in time of abundance may be preserved economically. – selection of product for canning – preparation of product for canning – selection of containers – placement of food in containers – processing – storing canned products – using in meals	5.92 **Intermediate Level** *Application:* Uses scientific principles as a basis for techniques that are sound in the canning of food.	5.92 (Learning experiences are not appropriate for this conceptual statement at this level.)
5.93 **Controlling the chemical environment** preserves food by providing an environment where the growth of spoilage agents is controlled or prevented. Examples: – acids and salt in pickling – sugar concentration in jams and jellies When principles using the **chemical control of environment** are applied to some food products, foods may be preserved in the home to be used as accents or complements to other foods. – selection of product – processing	5.93 **Intermediate Level** *Application:* Applies the scientific principles related to using sugar to preserve foods.	5.93 (Learning experiences are not appropriate for this conceptual statement at this level.)

LEARNING EXPERIENCES

Intermediate Level

Advanced Level

5.92 A person from the community extension service demonstrates methods of preserving food by heat sterilization.

Students outline principles of heat sterilization as they apply in: pressure canning, water bath canning hotpack, etc.

Student groups using differing heat sterilization to preserve food evaluate results and tell how the products might be used in meals.

5.93 Students view films, filmstrips, or teacher demonstration on making jelly, using frozen or canned fruit juice and commercial pectin.

Students explain steps in jelly making. In small groups, students prepare jelly, and evaluate results.

Topical Outline
5.0 Factors Involved in Food Preparation
5.94 Other Preservation Methods

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	Beginning Level
– sealing in containers – storing – using in meals		
5.94 **Methods** of food preservation **utilizing other scientific principles** are continually being developed and may extend the possibilities for food preservation. Examples: – ionizing radiation – antibiotics **Dehydration** removes the water necessary for growth of microorganisms and enzyme action and through concentrating the sugars and acids within the food creates an unfavorable chemical environment for the spoilage agents. Examples: – drying – freeze drying	5.94 **Intermediate Level** *Application:* Uses knowledge of characteristics of foods preserved by different methods in selecting foods for a particular use in a particular situation.	5.94 (Learning experiences are not appropriate for this conceptual statement at this level.)

LEARNING EXPERIENCES

Intermediate Level

Advanced Level

5.94 Students study commercially prepared foods and identify how they are preserved. What presefvative may be added during processing?
(Check labels)
Students take a field trip to a cannery or food preservation plant. Students compare procedures observed to home preservation of food.

Students with special interests in newly developing methods of food precessing, investigate further and report to class. Students show actual examples of foods prepared by new processes.

TOPICAL OUTLINE

- 6.0 Commercial Food Preparation
  - 6.1 Food Terminology
  - 6.2 Equipment
    - 6.21 Types and Sizes
    - 6.22 Placement
    - 6.23 Care
    - 6.24 Safety
  - 6.3 Hygiene and Sanitation
    - 6.31 Bacteria Growth
    - 6.32 Food Supply
    - 6.33 Equipment
    - 6.34 Food Preparation
    - 6.35 Products
    - 6.36 Work Areas
      - 6.361 Handling of Glassware, Cutlery, Pots and Pans
      - 6.362 Dishwashing Process
    - 6.37 Garbage Control
    - 6.38 Personal Hygiene
  - 6.4 Planning
    - 6.41 Type of Function
      - 6.411 Self-served or Semi-self-served
      - 6.412 Served
      - 6.413 China or Disposable Service
    - 6.42 Menu Planning
      - 6.421 Development of Menu
      - 6.422 Physical Conditions for Preparation
  - 6.5 Importance of Formulas
    - 6.51 Standardized Recipes
    - 6.52 Reading and Interpreting Recipes
    - 6.53 Measurement
    - 6.54 Food Portioning
  - 6.6 Methods and Types of Preparation
    - 6.61 Selection of Methods of Cooking
      - 6.611 Moist Heat
      - 6.612 Dry Heat
    - 6.62 Preparation of Appetizers, Beverages, Soups
    - 6.63 Salad, Salad Dressing, Vegetables
    - 6.64 Breads, Batters, Cereals
    - 6.65 Desserts (Cakes, Pies, Pudding, etc.)
    - 6.66 Main Dishes
    - 6.67 Seasonings
  - 6.7 Merchandising
    - 6.71 Food Appeal for the Public
    - 6.72 Garnishes
    - 6.73 Displaying of Food
  - 6.8 Service
    - 6.81 Table Service
    - 6.82 Counter (Bakery, Snack Bar, etc.)
    - 6.83 Cafeteria
    - 6.84 Carry-out
    - 6.85 Station Upkeep

BIBLIOGRAPHY

Books

Amendola, Joseph. *The Bakers' Manual for Quantity Baking and Pastry Making*, New York: Ahrens Publishing Co., Inc., 1960.

Andrews, Helen H. *Food Preparation*, New York: McGraw-Hill Company of Canada Limited, 1967.

Casola, Matteo. *Successful Mass Cookery and Volume Feeding*, New York: Ahrens Publishing Co., Inc , 1960.

Dukas, Peter and Lundbery, Donald E. *How to Operate a Restaurant.* New York: Ahrens Publishing Co., Inc., 1960.

Forest, August. *American Culinary Art*, New York: Ahrens Publishing Co., Inc., 1958.

Fowler, West, Shugart. *Food for Fifty*, 5th ed., New York: John Wiley and Sons, Inc., 1971.

Huebener, Paul O. *Gourmet Table Service, A Professional Guide*, New York: Ahrens Publishing Co., Inc., 1968.

Kotschevar, Leland H. and Terrell, Margaret E. *Foodservice Planning, Layout and Equipment*, New York: John Wiley and Sons, Inc., 1961.

Kotschevar, Lendal H. *Quantity Food Production*, 2nd ed., New York: John Wiley and Sons, Inc., 1966.

Lange, Howard F. *Catering*, New York: Ahrens Publishing Co., Inc., 1955.

Longree, Karla. *Quantity Food Sanitation*, 2nd ed., New York: John Wiley and Sons, Inc., 1972.

Longree, Karla and Blaker, Gertrude G. *Sanitary Techniques in Food Service*. John Wiley and Sons, Inc., 1971.

Lundberg, Donald E. and Kotschevar, Lendal H. *Understanding Cooking*, Amherst, Mass: University Store, University of Massachusetts, 1968.

Richardson, Treva M. *Sanitation for Foodservice Workers*, Boston: Cahners Books, 1969.

Sultan, William J. *Elementary Baking*, New York: McGraw-Hill Book Company, 1969.

Terrell, Margaret E. *Professional Food Preparation*, New York: John Wiley and Sons, Inc., 1970.

Weiss, Edith and Hal. *Catering Handbook*, New York: Hayden Company, Inc., 1971.

West, Wood, and Harger. *Food Service in Institutions,* 4th ed., New York: John Wiley and Sons, Inc., 1967.

Villella, Joseph A. *Introduction to the Hospitality Industry of Culinary Arts and Service.* Technical Community College, School District of Omaha, Omaha, Nebraska, 1973.

Pamphlets

Educational Materials Center, National Restaurant Association, 1530 North Lake Shore Drive, Chicago, IL 60610.
Equipment Service and Maintenance, 1964.

Food-Borne Illnesses, English & Spanish, 1970.

A Guide to Spices, 1971.

Standardizing Recipes for Institutional Use, 1963.

Pope and Whitener. *What A Food Service Employee Should Know About Bacteria,* 1967.

Your Responsibility for Safety, 1963.

Today's Waitress, Self-instructional Training Booklet.

Today's Busboy, Self-instructional Training Booklet.

Today's Dishwashing Machine Operator, Self-instructional Training Booklet.

United States Department of Agriculture.
Fulton, Gilpin, and Dawson. *Recipes for Quantity Service,* rev. 1972, Home Economics Research Report No. 5.

Food Purchasing Guide for Group Feeding, Handbook No. 284, 1965.

U. S. Department of Health, Education, and Welfare.
Training for Quantity Food Preparation, Vocational Division Bulletin No. 261, Trade & Industrial Series No. 64.

Training Food Service Personnel for the Hospitality Industry, 1969.

Food and Nutrition Information and Educational Materials Center, National Agricultural Library, Beltsville, MD 20705
Repository of Instructional Materials: Food Service Personnel; Operational Management of Volume Feeding Services; Management and Training Research on the Child Nutrition Programs.

Nasco+Kitchen Tools and Utensils. *Correct Use; Sanitation and Cleanliness in the Kitchen;* and *Food Preparation Terms.*

Magazines

Cooking for Profit, 1202 South Park Street, Madison, Wisconsin

Food Executive, Food Service Executives Association, 815 Anthony-Wayne Bank, Fort Wayne, IN 64802.

Institutions/Volume Feeding Management, 270 St. Paul Street, Denver, CO 80206.

Today's Chef, 149 Woodland Drive, Pittsburg, PA 15236.

Films

Home Economics Section, Division of Vocational Education, Department of Education, 1535 West Jefferson, Phoenix, AZ 85007.

16MM Films with Teachers' Guides

Using Standardized Recipes

Sandwich Prep and Presentation

Fast Sandwich Making

The Hamburger Sandwich

A Cool Head for Salads

Give Your Eggs A Break

Vegetable Preparation

Braising and Stewing

Broiling

Roasting

Deep Fat Frying

Carving the Rib Roast

Presentation of Food and Beverage

Kitchen Safety – Preventing Cuts and Strains

Kitchen Safety – Preventing Machine Injuries

Dining Room Safety

Mr. Bus Boy

Table Setting

Cafeteria Service

Courtesy – Food Service is People Business

Courtesy – Inside Story

How Do You Look When it Counts?

Taking the Order

Eye of the Supervisor

Supervisor Motivating Through Insight

Topical Outline
6.0 Commercial Food Preparation
6.1 Food Terminology

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	LEARNING EXPERIENCES Intermediate Level
6.0 When the principles and methods of commercial food preparation are learned, the individual will be more likely to succeed in entry level positions.	6.0 *Application:* Demonstrates ability to use principles and methods of commercial food preparation. *Values:* Voluntarily studies principles and methods of commercial food preparation. *Manipulation:* Performs tasks and operates commercial food preparation equipment according to instructions.	6.0 Sequence of experiences, 6.1–6.85 is suggested to achieve these objectives.
6.1 When the food preparation and service terminology is learned, the individual will be able to understand the basic language of the industry.	6.1 *Comprehension:* Defines common terms used in the food preparation and service industry. *Awareness:* Uses terms as a part of his vocabulary.	6.1 Students will examine menus for various restaurants to determine food terminology uncommon to them. Each student will interview at least one food service worker after various food service jobs are identified in class. The interveiw will be used to become familiar with common food terminology. Students will list each word unfamiliar to them, bring to class, and share definitions. Students review trade journal for common terminology and list unfamiliar terms which are then defined in class. Students role play workers in a food service industry and make orders using these new terms.

Topical Outline
6.0 Commercial Food Preparation
6.2 Equipment
6.21 Types and Sizes

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	LEARNING EXPERIENCES Intermediate Level
6.2 When an individual is aware of and can use the correct tools and equipment, he possesses one basic skill for food service.	6.2 *Application:* Applies principles and procedures for use of equipment in simulated or real situations. *Values:* Consistently uses correct procedures and principles in operation of equipment. *Manipulation:* Demonstrates his ability to operate and care for equipment according to instructions.	6.2 Students take a field trip to the school cafeteria or commercial food service establishment to view various pieces of equipment. Students discuss use of smaller pieces of equipment for quantity preparation which are available in classroom.
6.21 **When knowledge of specific tools and equipment is available, the individual will be more able to select and use the correct tool for the right job.**	6.21 *Awareness:* **Exhibits awareness of the need for specific tools for specific jobs.** *Manipulation:* Uses specific equipment according to instructions.	6.21 Student demonstrations or illustrated talks on common pieces of equipment are given. Included will be information concerning time savings, labor savings, safety in use, selection of tools, and hand vs. machine techniques. Groups of students select recipes which will utilize demonstrated equipment in a laboratory setting. Students review each other's choice of tools and illustrate the following: – substitute tools for a specific job – ease of operation of tool – wise choice of tool.

Topical Outline

6.0 Commercial Food Preparation
  6.22 Placement
  6.23 Care
  6.24 Safety

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	LEARNING EXPERIENCES Intermediate Level
6.22 When proper placement of equipment is understood, work efficiency can be increased.	6.22 *Comprehension:* Illustrates proper placement of large and small pieces of equipment in a food service establishment. *Awareness:* Places equipment according to its most effective usage.	6.22 Students will examine diagrams of kitchens in commercial and institutional premises to identify how the work flows. Students will then critique additional drawings for the following: – work flow – safety hazards – possible improvements.
6.23 When equipment is properly cared for and used, satisfactory performance and lasting service can be expected.	6.23 *Application:* Demonstrates the proper procedures in the care of equipment. *Awareness:* Displays his willingness to take proper procedures in caring for the equipment.	6.23 Students read reference material on the care and cleaning of various pieces of equipment. A field trip to the school cafeteria is taken to view various pieces of equipment being cleaned. Students identify in class reasons for proper cleaning.
6.24 When equipment for food service is to be used, safety in its operation is a vital consideration.	6.24 *Application:* Demonstrates the safe way to operate common equipment used for food service. *Values:* Committed to using equipment safely. *Manipulation:* Operates equipment using safety procedures.	6.24 Students prepare a bulletin board depicting safety and equipment use. Students view film strips available from the National Restaurant Association on safety in the kitchen. Teacher demonstrates the use of fire extinguishers available in laboratory. Students check each other in use of safety practices with lab equipment.

Topical Outline
6.0 Commercial Food Preparation
  6.3 Hygiene and Sanitation
    6.31 Bacteria Growth
    6.32 Food supply

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	LEARNING EXPERIENCES Intermediate Level
6.3 Understanding that hygiene and sanitation of food, and the premises in which it is prepared, is of utmost importance to the health of the public.	6.3 *Application:* Demonstrates sanitary procedures which are necessary for protection of employees and customers.	6.3-6.31 Students read Chapter VIII, Food Poisoning, *Hospitality Industry of Culinary Arts and Service*, or other similar reference. The Department of Public Health is invited to make a presentation of food service sanitation and inspection regulations. Students utilize methods learned from Health Department in cleaning laboratory and equipment.
6.31 Correct food handling procedures eliminate bacteria, yeast, and mold growth in foods. Prevention of spoilage and harmful bacteria growth in food is brought about through control of temperature and humidity in storage areas.	6.31 *Comprehension:* Identifies ways foods can be properly handled to prevent bacteria growth. *Awareness:* Accepts his responsibility in controlling bacterial growth in foods for the public.	6.31 Students observe slice of moldy bread and other spoiled food under microscope. Students investigate references or hear illustrated talk by teacher on ways to control growth of bacteria and other spoilage agents. Given a particular item of food, students describe how to store it to prevent spoilage.
6.32 Regular checking of food supplies as they are received and periodically during storage can prevent harmful materials from being transferred to the public. When disposal of garbage and insect and rodent control is carefully analyzed, and sanitary procedures established, food supplies are less likely to be infected.	6.32 *Comprehension:* Explains ways in which food can be contaminated and ways in which this can be prevented. *Awareness:* Accepts his responsibility of carefully checking food supplies when received and periodically during storage.	6.32 Students discuss ways foods can be contaminated from various sources: – rodents on premises – insects, etc. carried into facility on food packages – garbage remaining in facility. Ways of preventing those contaminations are derived.

Topical Outline
6.0 Commercial Food Preparation
6.33 Equipment
6.34 Food Preparation

	CONCEPTUAL STATEMENTS		STUDENT OBJECTIVES		LEARNING EXPERIENCES Intermediate Level
6.33	When equipment is properly cleaned and cared for regularly, less possibility exists for harmful bacteria or foreign material to enter the food being prepared. Procedures for cleaning each piece of equipment are needed by the worker to complete the task correctly and safely.	6.33	*Application:* Applies at least two standard procedures for cleaning equipment for sanitary purposes. Identifies means by which proper procedures can be obtained. *Awareness:* Shows his awareness of the reasons for careful cleaning procedures of equipment.	6.33	Students demonstrate technique of cleaning equipment observed in field trip to cafeteria or commercial food establishment.
6.34	When sanitary procedures for food preparation are observed, food is not likely to become contaminated through this portion of handling. Food-borne diseases which may be transmitted through food preparation to the consumer include the following: – Salmonella infections – Botulism – Trichinosis – Staphylococcus infections – Streptocuccus infections Reasons for these diseases to reach the public include: – improper cooking and holding temperatures – inadequate cold temperatures – unsanitary handling of the food.	6.34	*Comprehension:* Identifies sanitary procedures for hot food preparation, cold food preparation, milk goups, poultry and fish groups. Identifies the food-borne diseases and explains how these may be transmitted to the customer.	6.34	Students read about the food-borne diseases and how these pass from one source to another including the customer. A bulletin board depicting food-borne disease transfer is diagrammed by the teacher or students. Students discuss in class ways to prevent these diseases from being carried to the public.

Topical Outline

6.0 Commercial Food Preparation
    6.35 Products
    6.36 Work Areas
        6.361 Handling of Glassware, Cutlery, Pots and Pans
        6.362 Dishwashing Process

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	LEARNING EXPERIENCES Intermediate Level
6.35 After food is prepared, food-borne disease can still be carried to the public if proper temperatures (hot and cold) are not maintained.	6.35 *Comprehension:* Identifies proper temperatures for holding hot and cold foods. *Awareness:* Accepts the responsibility for keeping foods at proper temperatures to prevent food contamination and spoilage.	6.35 Students read about temperatures at which hot and cold foods must be kept to insure that the food will not spoil or allow bacteria to enter, develop, and/or grow. Small groups depict through collages how to keep hot food hot and cold foods cold, and identify the problems when this is not done.
6.36 Work areas, to remain free of food-borne diseases, must be properly cleaned with a germicide. Waste from foods left on counters and work areas can contaminate food.	6.36 *Comprehension:* Summarizes methods of cleaning work areas. *Awareness:* Accepts his role as a worker in relation to sanitation of work area.	6.36 Selected students demonstrate and explain how to clean walls, fixtures, and work surfaces. Differences in household and commercial cleaning are identified.
6.361 When glassware, cutlery, and pots and pans are handled, care needs to be given to sanitary procedures: – glasses should be handled around bottoms – cutlery should be handled only by handles – pots and pans should be handled only on the outside.	6.361 *Comprehension:* Identifies the methods by which glassware, cutlery, and pots and pans can be handled using sanitary procedures. *Awareness:* Accepts his role as a worker in relation to sanitation in regard to moving glassware, cutlery, and pots and pans.	6.361 A silent demonstration illustrating the improper ways to handle glassware, cutlery, and pots and pans is given with students writing the improper points they see. Students then discuss these points and how to correct them. Students observe methods used in various restaurants and relate their reaction to improper serving techniques.
6.362 When correct dishwashing procedures are followed, sanitary dishes are the result.	6.362 *Application:* Identifies machine procedures for at least one manufacturer. Applies hand washing methods according to bulletined procedures.	6.362 Students view filmstrips on dishwashing available from the National Restaurant Association and other sources.

Topical Outline

6.0 Commercial Food Preparation
6.362 (cont.) Dishwashing Process
6.37 Garbage Control
6.38 Personal Hygiene
6.4 Planning

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	LEARNING EXPERIENCES Intermediate Level
6.362 (cont) Procedures include those for machine and by hand: – correct temperature for washing and rinsing – *three* compartments for washing and rinsing – clean sinks and table for drying – products used for sanitizing.	6.362 (cont) *Awareness:* Accepts his responsibility for the proper sanitation of dishes for the public. *Manipulation:* Follows directions in accomplishing correct dishwashing procedures.	6.362 (cont) Discussion of the use of three sinks for hand washing, water temperature for washing and rinsing, follows the films. Students then simulate situations for hand washing to illustrate methods described in films.
6.37 When proper procedures for garbage removal are followed regularly, danger of food-borne disease is lessened.	6.37 *Comprehension:* Identifies garbage procedures necessary for prevention of food-borne disease in foods to be served to the public. *Awareness:* Accepts his responsibility for sanitation in garbage removal procedures.	6.37 Students discuss the problems involved in garbage removal with various restaurant and institutional managers, and report findings to class. Other students read about procedures to use in garbage removal and report to class.
6.38 When the food service worker does not use hygienic procedures or is ill when working, disease can be spread through food to the public.	6.38 *Comprehension:* Identifies five poor hygiene habits which may cause bacteria to enter food. Lists which illnesses and accidents should prevent a person from working with food for the public.	6.38 Students role play food worker who does not use proper hygiene in the handling of food and the problems caused by the worker. The story of "Typhoid Mary" is told by teacher regarding how many people were sick due to one person's handling of a food source.
6.4 When planning for food service, the type of function and service as well as the menu will be factors to consider.	6.4 *Application:* Collects and chooses appropriate ideas for the service and menu for a given function.	6.4 Sequence of learning experiences, 6.41 – 6.423, is suggested to achieve these objectives.

Topical Outline
6.0 Commercial Food Preparation
6.41 Type of Function
6.411 Self-Served and Semi-Self-Served
6.412 Served

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	LEARNING EXPERIENCES Intermediate Level
6.41 When the type of function is known (i.e., banquet, party, etc.), the method of service can easily be established. Various types of businesses specialize in certain kinds of service. Services include: – catered – buffet – cafeteria – table service – counter – banquet.	6.41 *Comprehension:* Differentiates between various types of services required for various functions.	6.41 Teacher gives illustrated lecture for students on various types of functions for which food service can be provided. Illustrations show various methods of service which might be utilized. In small groups, students choose one of the following and discuss how the function may be served: – wedding reception – banquet for a club – luncheon for twenty-five – industrial workers lunch – new restaurant.
6.411 A popular type of service, the self-served and semi-self-served method, provides for fewer service employees and a maximum of holding equipment. Cafeteria and buffet service is dependent upon a well-organized serving procedure and arrangement.	6.411 *Comprehension:* Explains the self-served and semi-self-served methods, identifying key components.	6.411 One group of students research, demonstrate, and explain self-served and semi-self-served methods of service. If possible, video tape or film such an operation for critique by class after initial discussion.
6.412 When table or banquet service is to be utilized, elements to be considered include: – the number of waiters or waitresses and busboys will be increased – the foods must be served to more guests all at approximately the same time – portioning is well-controlled – procedures are well-established.	6.412 *Comprehension:* Explains table and banquet service and identifies key components of each.	6.412 Another group of students research, demonstrate, and explain table and banquet service. Again, if possible, video tape or film portion of service for examination by class.

Topical Outline
6.0 Commercial Food Preparation
6.413 China or Disposable Service
6.42 Menu Planning
6.421 Development of Menu

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	LEARNING EXPERIENCES Intermediate Level
6.413 A choice is available in the type of serving dishes to be used. The functions and the purpose may determine the choice of china or disposable service.	6.413 *Comprehension:* Recognizes types of functions which require disposal service. States three reasons for using disposable dishes.	6.413 Several students discuss with a caterer, an institutional manager, and a short order restaurant manager the use of disposable dishes. What are the advantages and disadvantages? Report to the class on findings.
6.42 When menus are planned, creativity and imagination are necessary for an appeal to the public or institutionalized individuals. Various helps are available such as forms for writing menus, records of menus, sequence in steps for plannning which may provide guidelines for implementation.	6.42 *Application:* Determines menu planning assistance for both commercial and institutional food services.	6.42 Students collect menus from various restaurants and institutions to review color, texture, food combinations, prices, and use of seasonal and local foods. Students then compare menus from like establishments and discuss what elements were utilized in determining the menus.
6.421 When menus are being developed, key factors of concern include: – number to be served – knowledge of people being served – nutrition needs of people – knowledge of food combinations – budgeted monies. – When an accurate count of the number of people to be served is known, estimates of amounts of food, help needed, and service needed can be completed.	6.421 *Application:* Structures menus for 25 elderly patients in a rest home, a small catered party, a regular hospital meal, a take-out hamburger shop. Identifies the factors which are pertinent in menu planning for the above groups. *Comprehension:* Identifies methods by which estimates of numbers of people are determined.	6.421 Students hear restaruant manager and dietitian discuss how their menus are planned and how they estimate the numbers for which to prepare. Students, by groups, prepare menus for each of the following: – 25 elderly patients in a rest home – a small catered party – a take-out hamburger shop.

CONCEPTUAL STATEMENTS

6.421 – (cont) Knowledge of the people being served may include age, occupation, sex, and special diets required.

– When menus are planned, nutritional needs of people are considered as one of the primary factors.

– When food combinations are determined, flavor and appearance, variety in texture, and color may be considered.

– Use of locally available foods may be considered. Menu combinations normally include meat or entree, vegetable, salad, bread, and possibly dessert.

– When a budget is determined, various factors may be assessed in making decisions:
- past records
- anticipated income and expenses
- use of standardized recipes
- cost of personnel
- standardized portions
- inventory on hand.

STUDENT OBJECTIVES

6.421 – (cont) Explains four factors which will influence menu planning.

– Explains how nutritional factors can be worked into menu planning for (1) a public group, and (2) an institutionalized group.

– Illustrates at least three normal menus with various combinations of foods which have varieties in color, texture, flavor and appearance.

– Describes the factors to be considered in budgeting for food service.

LEARNING EXPERIENCES
Intermediate Level

6.42- 6.421 Factors utilized in planning are identified in each menu. Menus are evaluated for factors to be considered in menu planning.

A panel discussion on why it is important for commercial food establishments to be concerned about the nutritional content of their foods is conducted by pro and con groups of students.

Students hear food service manager tell about food costs in relation to business profit and the consumer. Points the speaker will be asked to relate include how food service workers can keep costs down to a minimum. Students examine records kept by a food establishment on stocks, food costs, and operational costs to identify factors which influence the budget of such a business.

CONCEPTUAL STATEMENTS

6.422 When planning for food preparation is being considered, three physical conditions may need to be assessed:

- facilities
- equipment
- personnel.

- When the facilities are limited by size, location, floor plan, etc., the menu may need to be restructured to meet these conditions.

- When equipment is limited or of the wrong type for a function, alternatives in the menu may need to be planned.

- When a menu is being planned, consideration needs to be given to the number of personnel which will be required to carry out the functions and the cost which this will incur.

STUDENT OBJECTIVES

6.422 *Comprehension:* Explains the three physical factors to consider in menu planning.

Knowledge: Lists at least four factors concerned with the facility which should be considered when planning menus.

- Recognizes at least three problems with equipment which may indicate a need for change in a planned menu.

- Lists ways the lack of personnel may hamper a function's success.

LEARNING EXPERIENCES
Intermediate Level

6.422 Teacher discusses with class the three physical factors which may need to be assessed for menu planning:

- facility
- equipment
- personnel.

Teacher develops for students a case study depicting a situation in which the menu is elaborate and the number to be served very large. The dishwasher has just broken down and the steam jacket kettle has been out of action for a week. The repairman promises to come but has not arrived. To add to the confusion, three of the six employees, for one reason or another, will not be available the day of the big occasion. What problems may be expected? What alternatives may be expected? Possible solutions are discussed by the class.

Topical Outline
6.0 Commercial Food Preparation
6.423 External Influences
6.5 Importance of Recipes
6.51 Standardized Recipes

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	LEARNING EXPERIENCES Intermediate Level
6.423 When external influences are considered, changes in menus can be anticipated: – tourism – inclement weather – crop failure, crop harvest – shipping strikes – personnel strikes – season.	6.423 *Comprehension:* Identifies at least five external factors which may cause changes in menu planning.	6.423 Students discuss other external factors which may relate to the planning of a menu, and how these factors influence the changes in a menu.
6.5 When recipes for food products are used accurately, a desired product is more likely to result.	6.5 *Application:* Uses recipes correctly in preparing food products. *Awareness:* Shows awareness of the importance of using recipes for food products correctly.	6.5 Sequence of learning experiences, 6.51 – 6.54, is designed to achieve these objectives.
6.51 When understanding of standardized recipes is developed, then the individual will be more likely to prepare accurately a given product.	6.51 *Comprehension:* Illustrates his comprehension of the standardized recipes. *Awareness:* Accepts standardized recipes as a basis for food preparation.	6.51 Students view films or tranparencies on any food industry showing how standardized recipes are utilized. Classes discuss use of such recipes. (See reference, *Food Service in Institutions)* Given a list of ingredients, student groups write recipes in one of the accepted forms.

Topical Outline
6.0 Commercial Food Preparation
6.52 Reading and Interpreting Recipes
6.53 Measurements

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	LEARNING EXPERIENCES Intermediate Level
6.52 When recipes are read, interpretation must be accurate for standardized results in products.	6.52 *Comprehension:* Accurately reads a recipe and interprets the meanings of ingredients and amounts. *Awareness:* Shows awareness of the importance of accuracy in reading and interpreting the standardized recipes.	6.52 Students, by groups, study standardized recipes to become aware of the information in recipes and to gain understanding of the following: – adaptation of metric system – symbols – abbreviations – terms – equipment – weight – measurement – can sizes – temperatures. *Students show awareness by answering test questions covering this information.
6.53 Accuracy in measuring or weighing is an important factor in obtaining quality products.	6.53 *Application:* Measures accurately using measuring cups, spoons, etc., ingredients requiring measurement. Accurately uses scales to weigh ingredients according to quantity recipe. Distinguishes which type of measurement is required for which ingredients. *Manipulation:* Operates the kitchen scales accurately in measurements for one recipe.	6.53 Students demonstrate various measurement techniques and explain why accurate measurements are necessary. Each student practices weighing ingredients by the two methods. A small recipe may be planned by groups of students to provide a simulated experience in measurements. Discuss in class the difference between measuring and weighing and which has advantage for commercial food products.

Topical Outline
6.0 Commercial Food Preparation
6.54 Food Portioning
6.6 Methods and Types of Preparation

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	LEARNING EXPERIENCES Intermediate Level
6.54 When accurate devices are used for standardized portions, computation of the number of servings of food prepared is accurate. Devices for portioning include standard size pans, the use of scoops or ladles for portioningc portion scales, and portion markers for cakes, pies, etc. When portioning is enlarged, the cost of the product increases as fewer servings are available.	6.54 *Comprehension:* Explains how portioning becomes important to the cost of servings. Identifies four devices for standardizing portions.	6.54 The teacher displays a standard and non-standard pan, a scoop, a ladle, a scale, and a cakemarker. The teacher then describes the concept of portioning and demonstrates. Water may be used to ladle. Both a small and a large ladle may be used to compare the difference left in two pans after the ladles have been dipped. A cake from the standard pan and one from the non-standard are marked with cakemarker to illustrate the problems involved in non-standard equipment. Students are given the following situations to discuss: – A worker provides oversize portions to ten customers. What is the result? – Oversized portions and others undersized were given patients in a hospital.
6.6 The quality of food prepared is dependent upon the individual's skill in basic technique and methods. The method and type of preparation is dependent upon the amount of purchased preparedness. The food may be heat-and-serve, partially prepared, already portioned, prepared mix, or totally unprepared.	6.6 *Application:* Applies basic techniques in the preparation of five basic food areas. *Comprehension:* Gives examples of situations in which various types of prepared foods would be used.	6.6 Ingredients for the commercial chicken casserole are displayed in the heat-and-serve, partially prepared, mix, and individual ingredients. The teacher discusses with the student which would be used when. Students then prepare according to directions each of the items for chicken casserole assessing time, amount of preparation needed, and then the product derived. Questions to answer include: – When would each be used? – Where would each be used? – What are the advantages and disadvantages of each? The class discusses the types of skills needed by a food preparation worker to meet standards expected by a particular business, such as cake decorating. Demonstrations are given such as use of garnishes and making of appetizers.

Topical Outline
6.0 Commercial Food Preparation
6.61 Selection of Methods of Cooking
6.611 Moist Heat
6.612 Dry Heat

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	LEARNING EXPERIENCES Intermediate Level
6.61 The selection of the method of cooking is dependent upon the type and grade of food and desired product.	6.61 *Comprehension:* Interprets to others the procedures in moist heat and dry heat cooking. Describes five basic seasonings for quantity foods.	6.61 Sequence of learning experiences, 6.611–6.13, are suggested to achieve these objectives.
6.611 When a food source is largely made of connective tissue or fiber, moist heat may need to be applied for long periods to soften the tissue.	6.611 *Comprehension:* Describes six foods which need to have moist heat applied. Gives examples of three moist heat methods.	6.611-6.612 Students will read information about basic cooking principles. A test of various foods will be conducted by students to determine whether they have little fiberous tissue, a medium amount, or more, such as: – stew meat – U.S. steak – celery – U.S. potato. A laboratory will be conducted to show the effects of cooking food sources with larger amounts of tissue when dry heat is applied and when moist methods are utilized. The same process is used with foods with little connective fiber using both moist heat and dry heat.
6.612 When a food source is largely free of connective tissue or fiber, dry heat needs to be applied for shorter periods of time to prevent toughening of tissue.	6.612 *Comprehension:* Describes six foods which require dry heat for shorter periods of time. Gives examples of two types of dry heat cooking.	6.61-6.66 (The following learning experience is one which may be placed with each type of food preparation or after several depending upon individual school situations.) Students participate in a simulated work experience situation for a limited number of hours in school cafeteria or similar situation. Students would have the opportunity to work in several stations, preferably after having similar laboratory experiences first.

CONCEPTUAL STATEMENTS

6.62 Procedures for preparing soups and sauces are closely related. Soups include cream and stock types.

Preparation of beverages is frequently a duty of the serving personnel. Beverages are made in quantities which will be used within a limited period of time. Common beverages prepared include coffee, iced tea, and milk drinks.

Appetizers and garnishes are frequently utilized for eye appeal and food interest.

Appetizers may include hot and cold beverages, vegetable, and breads.

STUDENT OBJECTIVES

6.62 *Application:* Prepares one recipe of cream or stock type soup for at least twenty-five persons. Judge according to a standard scale.

Application: Prepares one common restaurant beverage according to a recipe.

Application: Prepares one type of vegetable appetizer for eye appeal and food interest.

Manipulation: Manipulates utensils and tools skillfully enough to prepare soups, beverages, and appetizers.

LEARNING EXPERIENCES
Intermediate Level

6.62 Discuss ways in which soups, sauces, and gravies relate. Students read about basic principles of soup making. Groups of students demonstrate the following:

- milk-based soups
- brown and other stock soups
- garnishes for soups.

Demonstrations should include information on what a standard product is, how to avoid problem areas with product, and how to correct problems after they occur. Students develop quality standards. Various types of commercial coffee preparation are demonstrated. Students then experiment with various amounts of coffee and water in preparation. Each is then evaluated.

Demonstrations are conducted on milk drinks and iced tea illustrating basic principles of preparation.

Teacher displays various appetizers and demonstrates preparation of vegetables.

Students select and prepare appetizers and evaluate according to eye appeal.

Students discuss characteristics of beverage appetizers that make them appealing:

- cold
- tart
- colorful
- fresh.

Topical Outline
6.0 Commercial Food Preparation
6.63 Salads, Salad Dressings, Vegetables

CONCEPTUAL STATEMENTS

6.63 When salads are to be prepared consideration may be given to the purpose the salad will serve.

Salads include fruit, vegetable, gelatin, and main dish.

Ingredients may be selected for freshness.

Salad dressings may include mayonnaise base, french, cooked fruit, and cream. As vegetables are selected, consideration should be given to other preparations of foods on the same menu.

STUDENT OBJECTIVES

6.63 *Application:* Prepares two types of salad, taking into consideration the quantities of ingredients needed.

Application: Prepares one type of dressing.

Application: Prepares at least two vegetables in using this type of preparation.

Manipulation: Manipulates the necessary tools and equipment in the preparation of vegetables.

LEARNING EXPERIENCES
Intermediate Level

6.63 Students prepare bulletin board showing attractive salads. Discuss and identify salads appropriate for various portions of the meal.

Standards of quality, availability, and seasonal products are researched and discussed.

Students experiment with fruit salads, utilizing products such as absorbic acid and lemon juice to prevent browning.

Teacher or students demonstrate preparation of a green salad, peeling of citrus for fruit salad, and vegetable garnishes.

Students discuss "house dressings" and ways to prepare basic dressings. Students, by group, then develop a "house dressing" and prepare.

Students read principles of vegetable preparation. Class then discusses the following:
- fiber content in relation to cooling method
- mustard content in relation to cooling method
- color retention in cooling and holding methods.

Students, by group, then prepare two of the following types of vegetables:
- fiberous
- little fiber
- leafy.

Topical Outline
6.0 Commercial Food Preparation
6.64 Breads, Batters, Cereal
6.65 Desserts (Cakes, Pies, Puddings, etc.)

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	LEARNING EXPERIENCES Intermediate Level
6.64 A variety of breads may be prepared for use in food service: – quick breads – yeast breads – ready-to-serve breads. Cereals include instant, partially prepared, and unprepared.	6.64 *Application:* Prepares one quick bread and one yeast bread from scratch. Prepares one partially prepared yeast or quick bread. *Application:* Prepares one partially prepared cereal. *Manipulation:* Manipulates the doughs, batters, and equipment for each to achieve a product that is standard.	6.64 Students develop bulletin board for quick and yeast breads. Characteristics of the two types of bread are then discussed in class identifying the basic principle of cooking and the methods of preparation. Various methods of preparation including prepared and partially prepared are discussed. Students are then divided into groups to prepare and compare the following: – quick bread scratch, mix, ready-to-bake – yeast bread scratch, mix, ready-to-bake. A comparison of the products in time, cost, and consumer appeal is made.
6.65 Desserts may be created as specialties of the establishment or only an accompaniment to the menu. When desserts are considered, prepared mixes are to be considered for time and cost savings. Variations may be created for specialty items.	6.65 *Application:* Prepares one prepared mix creating at least one variation as a specialty item.	6.65 Ask a baker or dessert specialist to demonstrate for the class a specialty. Ask the speaker to discuss which desserts sell best in their establishment, what ususally has most eye appeal, and when commercial establishments should consider making or buying dessert. Identify what the problems are with dessert cooking and possible solutions. Groups of students then select from the following to demonstrate for the remainder of the class: – pudding, gelatins & topping – cake – cookies – pastry. Students identify in demonstration priciple of cooking, holding, and displaying.

Topical Outline
6.0 Commercial Food Preparation
6.66 Main Dishes

CONCEPTUAL STATEMENTS

6.66 Main dishes may include meat, fish, poultry, and casseroles. The tenderness of meat will determine the method of cooking. Tenderness and the cooking method for poultry will be determined by age. Fish may be cooked by any method. Casseroles usually include less tender cuts which require longer, moist heat methods.

STUDENT OBJECTIVES

6.66 *Application:* Identifies basic types of main dishes and the methods of preparation. Selects and prepares two main dishes using various cooking methods and ingredients to achieve a standard product.

LEARNING EXPERIENCES
Intermediate Level

6.66 A field trip to a wholesale meat company is planned to see the wholesale cuts and the characteristics of the meat which goes to the commercial establishment. The school cafeteria manager, a restaurant manager, and a dietitian are asked to a panel to discuss ways meats are stretched for the consumer and costs cut. They are asked to identify ways the food service worker can help in cutting these costs.

Principles of meat, poultry, and fish cooking are discussed with methods for tender and less tender cuts identified. Methods to be discussed include:
- roasting
- broiling
- pan frying
- simmering
- baking
- pan broiling
- braising
- electronic cookery

Students then demonstrate preparation of various meat cuts, poultry, and fish, using various preparation methods. A time and cost record is kept along with the evaluation of the product. A field trip is planned to a restaurant where electronic equipment and a steam deep fryer are used for students to view quick methods of cooking meat, etc.

Topical Outline

6.0 Commercial Food Preparation
    6.67 Seasonings
  6.7 Merchandising
    6.71 Food Appeal for the Public
    6.72 Garnishes

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	LEARNING EXPERIENCES **Intermediate Level**
6.67 Seasonings are utilized to enhance flavor of a product according to the food services policy.	6.67 *Comprehension:* Describes common seasonings used in commercial and institutional cooking. Explains some times seasonings are not utilized.	6.67 A group of students will prepare hamburgers seasoned five ways. Others will taste and note differences. Class then will discuss how various food establishments prepare food with special secret seasonings to attract customers.
6.7 Merchandising techniques may be display, salesmanship, garnished food served, atmosphere, and advertising.	6.7 *Comprehension:* Summarizes the ways in which food is merchandised. *Awareness:* Accepts his responsibility as a food service worker for merchandising the product.	6.7 Sequence of learning experiences, 6.71–6.73, is designed to achieve these objectives.
6.71 When food is generally appealing to the consumer, the consumer is more likely to buy additional or more expensive food than if it does not have eye appeal.	6.71 *Comprehension:* Describes at least three ways food may be made appealing to the public for additional sales.	6.71 A collage of magazine displays of foods from Institutions Magazine and others is developed to illustrate ways foods are advertised, displayed, etc. Students identify why foods are appealing. Students role play situations in which a waitress is attempting to increase the amount of the sale. Identify key factors in promoting additional sales.
6.72 When garnishes are utilized to assist in making foods appealing, additional care may need to be taken to assure freshness, color, and general attractiveness of garnish.	6.72 *Comprehension:* Describes three ways in which garnishes can be prepared to provide attractive accompaniments to a menu.	6.72 Students make bulletin board of foods with attractive garnishes to illustrate ways food can be made more appealing. A selected group of students demonstrate a few simple garnishes that could be used for the purpose of merchandising the food.

Topical Outline
6.0 Commercial Food Preparation
6.73 Displaying of Food
6.8 Service

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	LEARNING EXPERIENCES Intermediate Level
6.73 Display may be used as a means of merchandising food by creating a desire for certain types or additional food. Methods may include: – cold tray of meats or desserts – desserts with mirrored image – salad buffet – flaming desserts and salad preparation at tables – cafeteria and buffet placement of foods.	6.73 *Comprehension:* Describes at least three ways food can be displayed for the purpose of merchandising. Illustrates ways in which buffet and cafeteria displays can be established for greatest means of merchandising.	6.73 Students prepare four trays or dishes of identical foods with one arranged and garnished attractively, one arranged so-so, one with no garnishes, and one in disorder. Serve to a test group and note their selection and comments. Compare results and draw conclusions concerning arrangement and garnishing. Students share actual experience of customers buying food because of the way it was displayed.
6.8 The serving of food may include the merchandising and serving of food, assistance in cleaning, and maintenance of table supplies.	6.8 *Application:* Applies the skills necessary for table service, counter service, and tray-line service.	6.8 Sequence of learning experiences, 6.81–6.85, are suggested to achieve this objective.

Topical Outline
6.0 Commercial Food Preparation
6.81 Table Service
6.82 Counter (bakery, snack bar, etc.)

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	LEARNING EXPERIENCES Intermediate Level
6.81 When table service is utilized, the following may need to be considered: – serving procedures – attractive and effecient service – working with other personnel.	6.81 *Application:* Demonstrates ability to set a table correctly, serve and remove dishes properly, handle trays skillfully, and handle unpleasant situations satisfactorily. *Value:* Is committed to carrying out the duties of a waiter/waitress to provide service which will enhance the business of the establishment. *Manipulation:* Demonstrates beginning skill in serving customers.	6.81 Basic table settings for each of the following is displayed and described by student: – American – English – Banquet. Students practice table setting and removing of dishes. After student demonstrations, students may practice seating patrons, presenting and interpreting the menu, taking and placing orders. Students watch demonstration on the handling of trays and then practice using them. Students are given the following problems to solve in role playing: – an unhappy customer – the wrong order arrives from the kitchen – a glass of water is spilled on a patron – the busboy is disagreeable.
6.82 Counter service may include such services as bakeries, snack bars, carry-out service, and cafe counter. When counter service is provided, many times many short order foods are prepared by the personnel serving. Sales may depend upon courtesy, attentiveness, enthusiasm, and ability to interest people in certain items.	6.82 *Comprehension:* Summarizes the duties involved in counter service. Explains the sales techniques necessary for success. *Awareness:* Accepts responsibility for the duties of counter service personnel.	6.82 Students role play several situations depicting counter service: – bakery – cafe counter – snack bar – carry-out service. Students review from role playing the kinds of salesmanship needed to be successful in counter work.

Topical Outline

6.0 Commercial Food Preparation
  6.83 Cafeteria
  6.84 Carry-out
  6.85 Station Up-keep

CONCEPTUAL STATEMENTS	STUDENT OBJECTIVES	LEARNING EXPERIENCES Intermediate Level
6.83 When cafeteria service is provided, the food service worker needs skills to prepare and deliver food trays, keep line moving, and skill in accurate portioning.	6.83 *Comprehension:* Summarizes the skills necessary for cafeteria service.	6.83 Students observe a cafeteria line and identify skills necessary for service. Problem points are identified and then discussed in class.
6.84 When carry-out service is rendered, speed and accuracy are essential to the success of the establishment. Personnel must coordinate preparation and service.	6.84 *Comprehension:* States the characteristics of carry-out service and necessary skills for personnel.	6.84 Students observe and interveiw personnel in a carry-out service for the following information: – services rendered to the customer – preparation carried out – advantages and disadvantages of such work. Students discuss in class findings of individual or group field trips.
6.85 To provide for harmony among personnel, each worker needs to assume responsibility for maintaining his work station by performing routine cleaning and supplying tasks.	6.85 *Comprehension:* Describes effect, on all personnel, of a well-organized line of duties.	6.85 Students role play work situations such as: – waitress coming on duty where station is maintained – waitress coming on duty where all containers are dirty and empty – workers in establishments where supervisor fails to outline extra duties. Students describe effects of these situations on personnel harmony.

Appendix 1.0

A Daily Food Record

Date: ______________________ Name: ______________________

Female _____ Male _____ Age _____

Please list below everything you have eaten for the last 24 hours. Include all snacks and beverages:

	Food Groups				
1. What foods, if any, did you eat this morning? Item Amount	Milk, Milk Products	Meat, Fish, Eggs, etc.	Fruits, Vegetables	Bread, Cereals, Noodles, etc.	Other Foods
If you did not eat this morning, give reason: ____________ 2. What foods, if any, did you eat during midday? Item Amount					
Where did you eat lunch? ________ 3. Did you eat any snacks? Please list. Item Amount					
What is your favorite snack food? ____________ How much money do you spend a day for snacks? ____________ 4. What did you eat for your evening meal? Item Amount					
5. Other foods:					

Appendix 2.2

FOOD BUYING QUIZ

Each time you shop for food, you are faced with choices. The modern supermarket offers from 6,000 to 8,000 different items. Which you choose determines how well your family is fed, how much you pay for food. Try this quiz, prepared by U.S. Department of Agriculture food specialists, and see just how smart a shopper you really are.

1. Which of these cuts of beef is the least expensive per pound at your grocery store?

   (1) ☐ Round (2) ☐ Sirloin (3) ☐ Chuck (4) ☐ Rib

2. Your store is selling a dozen Grade A Large eggs for 56 cents and a dozen Grade A Medium eggs for 47 cents. Which is the better buy in terms of getting the most egg for your money?

3. Which of the following is the best preparation for your regular food shopping spree?

   (1) ☐ make out a list and buy only what is on it
   (2) ☐ check the ads to see what and where the best buys are
   (3) ☐ walk around the store and buy whatever appeals to you
   (4) ☐ don't keep a regular pattern of shopping

4. How can you tell if a cantaloup is ripe?

   (1) ☐ smell it
   (2) ☐ squeeze it
   (3) ☐ look for the date on the sticker
   (4) ☐ none of these

5. "Bosc" and "Anjou" are varieties of

   (1) ☐ sardines (2) ☐ grapes (3) ☐ pears (4) ☐ French beverages

6. Your market is having a sale on ground round at 99 cents a pound. The store also sells ground chuck at 79 cents a pound and plain ground beef at 49 cents a pound. You'd like to stock up on chopped beef and use it for meatloaf, spaghetti sauce, chile and casseroles. The best buy, for these purposes, is the

   (1) ☐ ground round (2) ☐ ground chuck (3) ☐ plain ground beef

7. The best way to store chicken in your refrigerator is

   (1) ☐ leave it in the original wrapping
   (2) ☐ remove the original wrapping, then cover loosely with waxed paper
   (3) ☐ rewrap in vapor-moisture-resistant paper

8. You can store canned food in your refrigerator after the can has been opened.

   ☐ True ☐ False

9. In which month are peaches in peak supply, most favorful and economical?

   (1) ☐ March (2) ☐ September (3) ☐ all year (4) ☐ June–July

10. It is important to know the storage time of many products to judge what quantity to buy. Match the following products with their recommended storage time in the refrigerator.

    (1) hard cheese ☐ a. 3 to 5 days
    (2) butter ☐ b. two weeks
    (3) eggs ☐ c. several weeks
    (4) ground meat ☐ d. one week
    (5) grapes ☐ e. 1 to 2 days

Appendix 2.33

WHAT'S ON THE LABEL!

The Federal Food, Drug, and Cosmetic Act and the Fair Packaging and Labeling Act specify a list of facts that labels must include before a product may be distributed for interstate commerce.

The nine basic facts required are:

1. The product name.

2. The variety, style and packing medium in conjunction with the product name. For instance, a shopper would want to know whether she's buying cream style or whole kernel corn, or whether she's buying peaches packed in water, light syrup or heavy syrup.

3. The net quantity of the contents of the container starting with all ounces for weights of 1 to 4 pounds and volumes of 1 pint to 1 gallon followed by a parenthetical statement of appropriate whole units with remainders in fractions or ounces.

4. The name, address and zip code of the manufacturer, packer or distributor.

5. A listing of dietary properties if significant. Many people require or prefer various dietetic foods and they need to be able to distinguish them from other styles of pack. For example, canned vegetables might be salt-free, and fruit and fruit drinks are often packed with artificial sweeteners.

6. A statement on any artificial color, flavor or preservative added.

7. If the quality of a product falls below standards set by the FDA, the label must say so. For example, a can may contain unevenly trimmed pears which are acceptable to the consumer, but the law insists that she must know why the product fell below the official standard.

8. All information must be in English.

9. A list of ingredients, unless a standard of identity for the product has been set by the government.

Appendix 2.33

THIS SAMPLE LABEL IS INCOMPLETE.

COMPLETE THE LABEL WITH THE APPROPRIATE INFORMATION.

Spaghetti & Meatballs
Net Weight 15 oz.

Distributed by Jones & Co.
City, State

Appendix 2.42

FOOD MYTHS AND FALLACIES

Honey will help people with arthritis.

Vinegar helps the body burn fats.

Eating fish and milk together will make you ill.

Fish and celery are brain foods.

Carrots will improve your eyesight.

Chemical fertilizers poison the land and crops that grow on it.

Juice from the hearts of artichokes can be used as a lotion for restoring hair.

Garlic will give increased physical strength.

Rice will cure high blood pressure.

White eggs are more nutritious than brown.

Oysters, raw eggs, lean meat, and olives increase sexual potency.

(Additional information available in "Food Facts Talk Back," the American Dietetic Association, 620 North Michigan Avenue, Chicago Illinois 60611, June, 1957.)

Appendix 2.43

GRANOLA

1	sm. box	oatmeal	*	1 tsp. vanilla
1	cup	wheat germ	*	raisins
1	cup	shelled sunflower seeds	*	chopped prunes
½	cup	slivered almonds	*	chopped dates
1	cup	coconut	*	½ cup sesame seeds
½	cup	oil		
½	cup	honey	*	Optional

Mix first 5 ingredients. (Cinnamon may be added, if desired.)

Mix oil and honey and vanilla. Heat just to boiling point and pour over oatmeal mixture. Mix well. Spread 1/3 to 1/2 of mixture on cooky sheet and bake at 325° for about 20–25 minutes, stirring 3 or 4 times. Do not let mixture brown too much.

Repeat with remaining mixture. Cool and store in plastic bag.

Add fruit after baking, if used.

HOW TO MAKE YOGURT

You can use fresh whole milk, skim milk, milk with cream added, dried milk, or evaporated milk (but not condensed). Heat to 180° F., then cool to 110°. For each glass of yogurt, stir in 1 heaping teaspoonful yogurt from yesterday's batch.

Pour milk into glasses. It takes 3 to 4 hours to make yogurt. The milk should now be kept at a uniform temperature of 105° F. to 118° F. till it has a smooth custard consistency.

TO MAKE YOUR first batch, you heat 1 pint milk to 180° F., and add commercial yogurt "starter" (in bottle). Or add "starter" from commercial yogurt.

Appendix 2.43

METHODS FOR SPROUTING SOYBEANS

Many persons have made one or two attempts to sprout beans but have given up in despair after they obtained nothing but a few handfuls of moldy, spoiled beans.

Whether a pound or a ton of beans are to be sprouted, two items should be purchased (1) soybeans that will grow, and (2) a can of chlorinated lime, which the chemist calls calcium hypochlorite and the housewife uses for disinfecting. After this, one needs a container for the sprouting beans. This should have a wide mouth for getting the beans in and out, with a hole in the bottom to drain off water. The producer of a pound of sprouted beans will select a flower pot, while the one who wishes to feed a hundred will use a clean, 20-gallon galvanized can with an open top and a hole cut in the bottom.

Beans are first inspected to make sure they are free from other seeds and broken pieces. These are usually removed before sale. The beans are then washed once or twice and allowed to soak overnight, starting with lukewarm water. A pound of beans needs about 3 pints of water. To this water the housewife adds a pinch of chlorinated lime. The man who sprouts 20 pounds of beans makes a paste of 3 teaspoons of chlorinated lime, mixes this with a pint of water and finally stirs it into the 30 quarts of water that covers his beans. The next morning the water used for soaking is poured off and the beans are poured into the sprouting vessel. In any case, remember that the beans will double their volume as they sprout.

For small amounts of beans use a clean flower pot, a loose cloth bag, a milk bottle or a fruit jar. If a flower pot is used put a piece of wire netting or cloth across the hole in the bottom. In the case of the bottle or jar, cover the opening with a piece of wire screen or cloth. Tie or wire this on after the beans are in the bottle.

A damp cloth should be used to cover the beans in the flower pot. This in turn is covered with a piece of damp cardboard to exclude light. The beans in the flower pot are watered several times per day. The bottom of the pot should be raised or tipped slightly so that all the water drains out. Each evening it is safest to sprinkle with water containing a teaspoon of chlorinated lime in three gallons of water. This is easily made up in a stock bottle and measured into a sprinkling can.

If the beans are placed in a bag they should be suspended in a dark, damp place such as a covered pan with a little water in the bottom. They are sprinkled like the beans in the flower pot.

If the beans are placed in a fruit jar or milk bottle, they are watered by filling the bottle two or three times per day, after which the bottle is turned upside down for the remainder of the time so the water will drain out and the beans get air. This bottle or jar should be kept in a dark place or the beans will turn yellow and then green.

If TWENTY pounds of beans are sprouted in a galvanized can, they can be watered every two or three hours with the spray nozzle of the garden hose, or better still with the head of the sprinkling can wired to the garden hose. The top of the can should be kept covered with a damp cloth, and kept dark. At the last wetting each evening the chlorinated lime, dissolved in water as above, should be used and applied with a sprinkling can. The chlorine in this water prevents the growth of molds and bacteria during the night when the beans are not sprinkled, just as it sterilizes drinking water.

After the second day the sprouting process makes the beans warm and they should be sprinkled with cool water. If they tend to get too warm, a cylinder of wire netting can be placed in the center of the can like a piece of stove pipe, with beans around it.

The beans are ready to eat on the third to fifth day. They should be treated about like fresh meat.

Appendix 2.6

FOOD SELECTION SKIT

(Please insert prices which are representative of the local area.)

Jane: "Hello, Judy. Glad you stopped by. It looks like you've been to the store. Come in."

Judy: "Yes, I'm loaded and I need to rest a little. I'm really beat today." [Noticing the other bag] "Have you bought groceries this morning, too?"

Jane: "Yes, I spent a $___bill. I was just about to put away all this."

Judy: "Just $___for so much. I spent $___, too, and I only have one bag. How did you do so well?"

Jane: "I can show you as I put things away." [She takes out her meats: pork roast (4 lb.), hamburger (1 lb.), tuna (1 can), 1 chicken.] "Did you get any meat?"

Judy: [Taking out pork chops (2 lbs.), steak (1 lb.), TV dinners (2), bacon (1 lb.).] "Yes, I got these yummy pork chops. Don't they look good? Eight of them for just $____. ’

Jane: "I got pork, too, a pork roast–4 lbs. for a little over $___How much did your pork chops weigh?"

Judy: "I don't know. Let's see. Oh, here it is, 1 lb., 14 oz. Hmmmmm. I see you got more for your money, but this will make a good meal."

Jane: "I hope mine will make two good meals. Did you get any beef?"

Judy: "A piece of steak. Not very big, but it will be good. That was____."

Jane: "I got a pound of hamburger for___¢. I think I'll make a meat loaf this time. It will go a long way with some rice or oatmeal added to it. Did you get any more meat?"

Judy: "These two TV dinners. They're sure handy when I don't feel like cooking."

Jane: "Yes, they are, but so expensive. I hope you feel like cooking most of the time. I got a can of tuna for___¢. Did you ever try it with noodles and a can of celery soup? That's almost as easy as TV dinners."

Judy: "No, but I must. I got a pound of bacon, too. We all love that."

Jane: "I didn't get bacon. Seems like it all cooks away in fat. Not much lean meat for the children to grow on. I got a chicken. Mine like chicken, and it goes a lot farther."

Judy: "Yes, I guess it does. Did you get any potato chips? My kids can eat a ton of them."

Jane: "No, I got my potatoes this way–10 lbs. for___¢. What did your chips cost?"

Judy: [Looking to see] "Ten ounces for ___¢. You really beat me there. You won't scold me for buying bread, will you?" [She takes out a loaf of oatmeal bread] "It's Roman Meal, the very best, and only ___¢."

Jane: "I got these two loaves of white enriched for ___¢."

Judy: "You didn't! I'm surprised that you'd buy white bread though. Isn't this better for us?"

Jane: "It has a little more food value, but enriched bread has a lot too, and when it is so much cheaper, I can't see buying the fancy kinds. What else did you get?"

Judy: "I got a dozen eggs, the grade A large kind. That's good, isn't it?"

Jane: "I get them sometimes, but if the medium size is as much as ___¢ cheaper on the dozen, I get more for my money with them. This time they were. I got two dozen."

Judy: "I bet you'll brag on me for getting this gallon of milk, won't you?"

Jane: "Milk is good for us, of course, and the children need four glasses a day. I looked at that gallon and thought—that's four quarts and for ___¢ more I can get 12 quarts of this kind" [she pulls a box of dry milk out of her sack] "and the food value is almost the same. My children have learned to like to drink this, but if yours haven't yet, you could mix it half and half and make your gallon go twice as far. I don't think they could taste this difference, especially if you mixed it well and served it very cold."

Judy: "Maybe I'll try that."

Jane: "You can also use this to make hot chocolate. Mix 1 cup of dry milk, ½ cup sugar, and ¼ cup (or 4 Tablespoons) of dry cocoa together and stir into 7 cups of water. We drink it every morning for breakfast. It's a good snack, too. Would you like a cup?" [If facilities permit, Jane actually mixes and serves. After the skit, the "audience" might be served, too.]

Judy: "Thanks. I'll have to make some. Maybe this will keep the kids from craving chocolate candy." [Taking out her 8 pack carton of "pop"] "I hate to show you this!"

Jane: "You should! You know that has no food value. When the children ask for a drink in my house they get this." [She takes out a large can of frozen orange juice.] "Would you believe that this will make as many glasses as your "pop" and for about half the cost? I sometimes freeze it into popsicles too, and the other day I stirred 4 Tablespoons of dry milk into a glass of it and we had a brand new drink. Orange milk shake!"

Judy: "How do you think of so many things?"

Jane: "Oh, I don't think of all of them by myself. I read magazines and talk to people. Even the newspaper has ideas I can try, and I get some from TV."

Judy: [Taking out her Variety Pack cereal.] "Did you get any cereal today? I got this so the children could all choose what they want."

Jane: "Yes, I got this cereal to cook. I'll have 24 bowls of mine for about what you paid for eight."

Judy: "I can't win!" [Taking out a pound of butter.] "I had to have butter today. Did you?"

Jane: "I got margarine. Butter costs about 3 or 4 times as much and we like this just as well."

Judy: "I got some tomatoes. I guess that was a splurge too, but they're so good."

Jane: "Yes, they are good. We eat lots of them in the summer when we have them in the garden, but now we drink tomato juice." [takes out a 46 oz. can]. "This will go quite a bit farther than those three tomatoes and it cost less, too."

Judy: "I guess this can of peas was a better buy than the tomatoes" [takes out No. 2 can of a "best quality" brand].

Jane: "Yes, it was. I got peas, too." [She takes out No. 2 can of a lesser quality and looks at the price on both cans.] "Mine was five cents less than yours. I'll admit yours will look prettier and taste better, but they don't have any more food value."

Judy: "Did you get any dessert? I got this frozen apple pie."

Jane: "I may have an apple pie too. I got these apples at a pretty good price. We'll have some for dessert and probably some for snacks."

Judy: "That takes me to the bottom of my sack. Do you have anything else?"

Jane: "Yes, I have a box of cottage cheese, a small head of cabbage, and this two pound package of carrots. I use carrots lots of ways–grated with raisins and peanuts, cooked with beef and pork roasts, or just plain raw carrot sticks."

Judy: "I wish I had gotten some. I see now how you got so much more than I did for your $__ How many meals can you make with all that?"

Jane: "That's a good question. Let's find out."[Both girls plan meals, write their menus on blackboard or poster, and place food in groups to show how it is used. Jane will probably get twice as many, and hers are likely to be more nutritious. In our class Judy ran out of food after about 2½ days and most of her meals were skimpy and unbalanced. Jane had 4 days of adequate meals. We assumed a family of four in each case.]

Mrs. Gen Kallander, former Home Economics Teacher, McNary, Arizona

WHAT DO YOU KNOW ABOUT EGGS?

Uncertain about your knowledge of eggs and egg quality? Try this true-false quiz from the U.S. Department of Agriculture and see how much you really know about buying and storing eggs.

Questions (Answer true or false)

1. A U.S. Grade A Large egg is better than a U.S. Grade A Medium egg.

2. You should never use a dirty or cracked egg in an eggnog.

3. A U.S. Grade B egg will be just as nutritious as a U.S. Grade A egg.

4. For best quality, store eggs promptly and large end up in your refrigerator.

5. All eggs in a carton marked "Large" are identical in size.

6. Not all cartons marked "Grade A" have been officially graded by the Federal-State Grading Service.

7. Eggs are no good after a week in the refrigerator.

8. If you want to serve poached eggs, U.S. Grade AA or A eggs would be your best choice.

9. Shell color does not affect the nutritive value or quality of eggs.

10. Leftover egg yolks should be covered with cold water before storing in the refrigerator.

Answers

1. False. A large egg is *bigger* than a medium egg, not better. Remember, size refers to weight of the egg; the grade refers to the quality of the egg.

2. True. Eggs eaten uncooked–as in an eggnog–should always be clean and shouldn't be cracked. This is just to insure an extra safeguard for your family against possible contamination by bacteria. Never buy cracked or dirty eggs. If you buy USDA-graded eggs, they will be clean and sound-shelled and will be safe to use for all purposes. If one becomes cracked accidentally, use it only in thoroughly cooked dishes. Don't use dirty eggs for any purpose.

3. True. The Grade B egg may not look quite as nice as the Grade A egg if you fry or poach it, but it will be just as nutritious.

4. True. Keeping eggs large end up will keep the yolk from sticking to the shell and help them keep their natural quality longer. Keeping them in the refrigerator is essential to keep the egg's natural quality. Get the eggs under refrigeration as soon as possible. Holding them for any length of time in a warm place can result in quality loss.

5. False. If a carton of USDA-graded eggs is labeled "Large," all the eggs together must weigh a least 24 ounces. There may be some slight variation between individual eggs, but rarely should any be smaller than the average for "Large," 2 oz. per egg. If you find apparent disparity in egg sizes, chances are you'll have some eggs larger than the average marked, not smaller. Here are the sizes usually sold, and the minimum weight per dozen for each size:

Extra Large	27 ounces
Large	24 ounces
Medium	21 ounces
Small	18 ounces

6. True. Only egg cartons marked with the official USDA grade shield have been officially graded under the Federal-State grading service. Eggs marked simply "Grade A" are supposed to meet State or local standards for quality which usually are based on Federal standards. Remember, you can be sure of egg quality if you look for the USDA grade shield.

7. False. Eggs will lose some quality (appearance) after a week in the refrigerator, but they will usually still be just as good in taste and in nutritive value. To prevent off-taste, don't store eggs next to cheese, citrus, fish, or other aromatic foods.

8. True. U.S. Grade AA and A eggs have high standing yolks, thick whites and won't spread out in the pan. These highest quality eggs are best for poaching or frying.

9. True. Shell color is determined by the breed of hen. It does not affect the nutritive value or quality of an egg.

10. True. Leftover egg yolks should be covered with cold water and stored in the refrigerator in a tightly closed container. Use within a day or two. Extra egg whites should also be refrigerated promptly in a tightly closed container and used within a day or two. Don't cover the egg whites with water.

To keep your egg knowledge score high, write for a free copy of "How to Buy Eggs" (G-144)., published by USDA's Consumer and Marketing Service.

Send a postcard request to Office of Information, U.S. Department of Agriculture, Washington, D.C. 20250. Please use you ZIP code.

Appendix 2.62

Guide for use with Learning Experience 2.62, Advanced Level.

1. What size and/or quality eggs were used in the finished product?

2. Did the size make any difference in the finished product?

3. Was there a taste difference noticeable to you in the finished product?

4. In what way did the quality of eggs make a difference in the finished product?

5. Which size and/or quality would you recommend to a consumer to buy for one or both finished products?

Appendix 3.1

FOOD BINGO

Food Bingo is designed to reinforce teaching of food grouping. Foods are grouped into **Milk** Group, **Bread and Cereal** Group, **Meat** Group, **Fruit and Vegetable** Group, and **Zero** Group (foods not belonging to any group such as sugar and fat).

A card is designed as in bingo substituting specific foods for numbers. Cards listing letters and food groups are used by the caller.

The caller calls and each player covers a food that fits in this group if he has it. The first player to get a straight line in any direction wins.

Example Card:

B	I	N	G	O
MACARONI	ORANGE JUICE	BEEF STEW	COLLARDS	PEACH
CHICKEN	RICE	SWEET POTATO	SPARE RIBS	CHOCOLATE MILK
DRIED MILK	CANNED MILK	FREE O	RAW CABBAGE	NOODLES
SUMMER SQUASH	FAT BACK	GREEN PEAS	BLUE-BERRIES	OKRA
PRUNES	BROCCOLI	WATER-MELLON	BLACK-EYED PEAS	TURNIPS

Example of Play:

Caller calls, "Under 'O' a cereal"
Player covers "noodles" on his card

O CEREAL

BASIC FOUR TIC TAC TOE

Choose a partner to play tic tac toe, and write in foods from the food groups instead of "X" or "O." The game is won if the foods are in the same food group vertically, horizontally or diagonally.

Appendix 3.2

GOLDILOCKS UP–TO–DATE*

Once upon a time a little girl by the name of Goldilocks wandered through the woods in search of adventure. She passed beautiful wild flowers and walked around and around among the trees until she came to a clearing where she found a patch of wild strawberries. She stopped to eat some because, like (1)____________ and (2)____________, they were a good source of (3) vitamin____________.

The day was ideally warm, the sky blue and the sun shining brightly, so Goldilocks removed her sweater. Exposing her arms to the sun gave her a better chance to acquire more (4) vitamin____________ so necessary for the prevention of (5)____________.

After eating all the ripe strawberries, Goldilocks noticed a large walnut tree nearby, and beneath it found some nuts from the previous fall. She hit one on a big rock and cracked it. It tasted better than those from Mother's pantry and at the same time gave her (6)____________ for building and repairing body tissue.

Goldilocks had seen enough of this part of the woods and decided to wander further on. Before long she came to a quaint little house made of wood slabs and somewhat hidden by the surrounding trees and shrubs. She peeked into the window and, seeing no one, slowly opened the door. She entered a kitchen and on the table discovered three bowls of vegetable soup. She tasted the largest bowl and said, "The vegetables in this soup will give me (7)____________ to promote growth and prevent disease, but this soup is too hot."

She tasted the soup in the middle-sized bowl and ate every last bit because it was just right.

Then, to help make her teeth strong and white, she decided to drink a glass of (8)____________. This contained the minerals (9)____________ and (10)____________ which, together with the (11) vitamin____________ from the sunshine, formed a three-man team that enabled these foodstuffs to be utilized in the body to the best advantage.

Goldilocks' next move was to look into the table drawer. Here she found a box of nails and said, "These contain (12)____________ but I can't eat it in this form. Perhaps the refrigerator will have (13)____________ or (14)____________ to give me this mineral."

Poor Goldilocks! She was just eating the last bite of bread when she heard a noise at the door. She peeked through the window and saw bears! Three of them! A large papa bear, a medium-sized mama bear and little baby bear! They were opening the door just as Goldilocks jumped out the window. She landed on all fours and when she stood up to run away, she discovered that her left hand had been cut by a piece of glass. She held the cut with her other hand and it soon stopped bleeding because her blood contained enough (16) vitamin____________ to help it to coagulate quickly.

Goldilocks arrived home with no appetite for the good dinner her mother had waiting. We know the reason why, don't we?

phosphorus
grapefruits
dried prunes
apricots
vitamin A
K
C
D
oranges
rickets
iron
milk
protein
calcium
raisins
dates

Answers

(1) grapefruits, (2) oranges, (3) C, (4) D, (5) rickets, (6) protein, (7) vitamin A, (8) milk, (9) phosphorus, (10) calcium, (11) D, (12) iron, (13) dates (14) prunes, (15) K

---

*Taken from *A Resource Guide for Food and Nutrition*, State of Florida, 1970.

Appendix 3.2

NUTRITION PRETEST*

True or False–Put a + for True and O for false.

1. Calcium helps your bones grow.
2. When selecting fruits and vegetables for the day's requirements, you can choose four apples.
3. You can substitute cheese in the diet for milk.
4. A food can contain several different food nutrients.
5. Starches and sugars are classified as carbohydrate foods.
6. Iodine is needed to prevent goiters.
7. Your diet depends on you.
8. Vitamin C is often referred to as the sunshine vitamin.
9. The Basic Four is a guide to help people choose food wisely.
10. If a person eats three meals daily, he is certain of good nutrition.
11. Soft drinks and carbonated beverages are nutritious.
12. Overweight is a sign of good nutrition.
13. Milk is good for every age.
14. Regular meals are not necessary for good nutrition.
15. Ice Cream provides calories along with vitamins and minerals.
16. Only fresh vegetables furnish vitamins and minerals.
17. Citrus fruits should be included in the diet daily as the body cannot store vitamin C.
18. A student who is very active in sports or work needs more high caloric foods in his diet.
19. One can control weight by skipping breakfast and eating a small lunch.
20. Iodine deficiency can be corrected by using iodized salt.
21. The easiest way to have a balanced diet is to eat three meals a day including the correct number of servings from the basic four groups.
22. One cannot live over a few days without eating food, even though he has liquids to drink.
23. Water or other fluids are very necessary in the digestive process.
24. Cellulose is a vegetable fiber that serves as a scrub brush in the digestive track, but is not affected by the digestive system.
25. You have to have a lot of money for food to have a well balanced meal.
26. Adults need just as much milk per day as do children.
27. Variety is not important when selecting foods.
28. The food we eat supplies our bodies with nutrients.
29. Meat, eggs, and milk products are the more important sources of proteins.
30. Citrus fruits are our main source of vitamin D.

*Mrs. Marilyn Lavin, Phoenix Union High School System

Appendix 3.2

NUTRITION PRETEST*

In each group there is one word that includes all others of the group. Write the letter in the proper space.

___ 31. (a) Fats (b) Nutrients (c) Proteins (d) Vitamins (e) Minerals
___ 32. (a) Thiamine (b) Niacin (c) Riboflavin (d) Vitamins
___ 33. (a) Butter (b) Lard (c) Margarines (d) Fats (e) Vegetable Oil
___ 34. (a) Calcium (b) Iron (c) Minerals (d) Phosphorus (e) Iodine
___ 35. (a) Vitamins (b) Ascorbic Acids (c) Riboflavin (d) Thiamine (e) Niacin

Match the right side to the left side by putting the correct letter in the space on the answer sheet.

___ 36. Protein
___ 37. Carbohydrate
___ 38. Fats
___ 39. Minerals
___ 40. Vitamins

A. Build and repair
B. Provide heat and energy
C. Regulate body processes

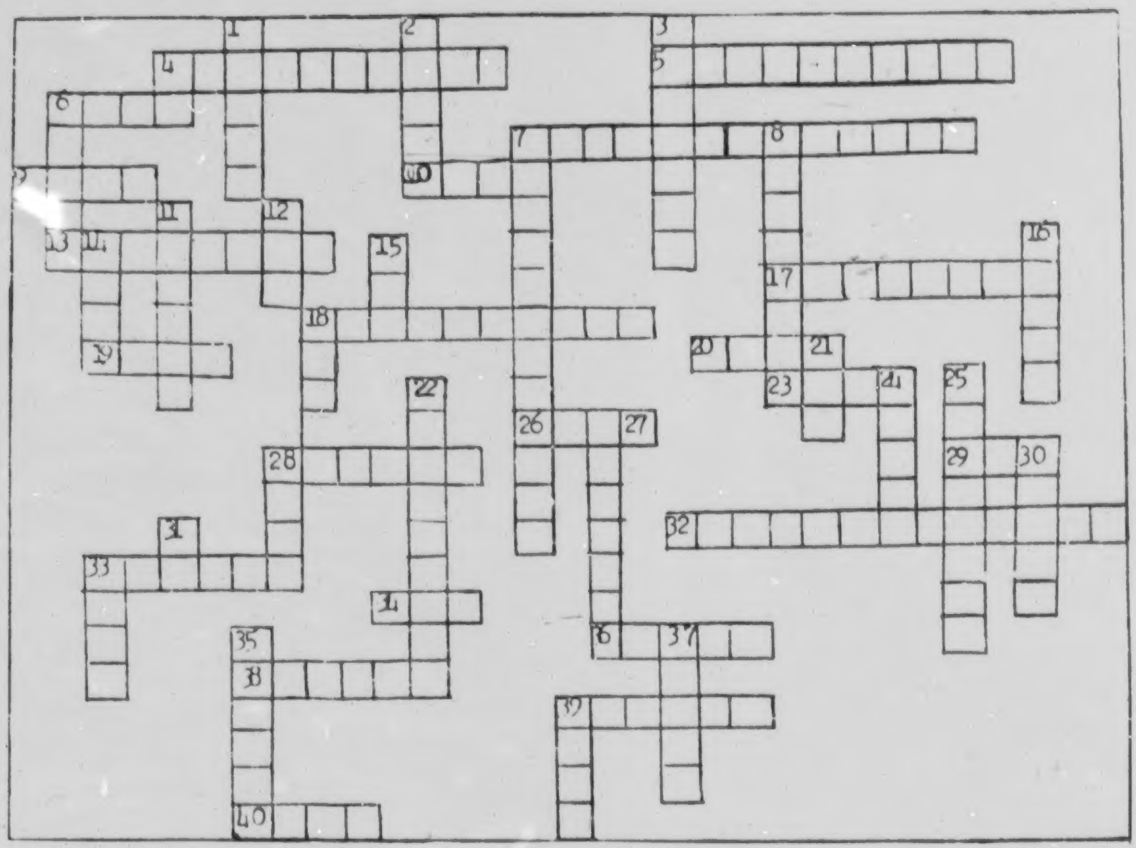
___ 41. Protein
___ 42. Carbohydrate
___ 43. Fats
___ 44. Minerals
___ 45. Vitamins

A. Milk Group
B. Meat Group
C. Fruit and Vegetable Group
D. Bread and Cereal Group

Mrs. Marilyn Lavin, Phoenix Union High School System

Appendix 3.2

NUTRITION CROSSWORD


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40

(Statements on the following page)

ACROSS

4. Mineral which helps build strong bones and teeth.
5. Stay young vitamin supplied by milk (one of the B vitamins).
6. Sodium chloride.
7. Louisiana product rich in providing vitamin A (2 words).
9. Plant from which we get sugar.
10. Small pie.
13. Too late to change food habits.
17. Vitamin B found in pork and whole or enriched cereals.
18. Foods low in calories, high in vitamins and minerals.
19. Necessary to grow plants.
20. A root vegetable with tops that can be used for greens.
23. Where plants get most of their nutrients.
26. Cereal grown in Louisiana.
28. Increase in size of body.
29. Time to change bad food habits.
32. Sugars and starches belong to this group.
33. The roughage and cellulose the body needs come from these parts of fruits and vegetables.
34. Nutrition helps you to be physically _________________.
36. Carbohydrate used for sweetening.
38. A "B vitamin" that prevents pellegra and is found in meats.
39. Prevents goiter.
40. Another species of 7 across.

DOWN

1. What water does at 212°F.
2. Food group usually sweet but low in calories, high in vitamins.
3. Needed for growth and repair of tissues.
4. Equal to two cups (abbreviated).
6. To change food habits _______ now.
7. Spring fruit rich in vitamin C. (plural)
8. Vegetable rich in vitamin C. (plural)
11. Beverage with no calories.
12. Supplies our milk.
14. Popular cereal grain.
15. A food most nearly like milk in protein content.
16. Calcium helps make these strong.
18. Strength we all desire.
21. Measure of 2,000 pounds.
22. Science of nourishing the body.
24. Type vegetables used in salad and high in vitamins A and C.
25. These substances used to build bones, teeth, blood, and tissues.
27. Root vegetable high in vitamin A. (plural)
28. Kept healthy by proper care and massaging, plenty of vitamin C; in partnership with the teeth.
30. Necessary for life but has no food value.
31. Pound (abbreviated).
33. Will supply energy.
35. Calories are a measure of this.
37. Starchy food made from corn.
39. Used to build hemoglobin.

(Key on the following page)

KEY TO NUTRITION CROSSWORD

(For Leader's Use)

ACROSS

4. Phosphorus
5. Riboflavin
6. Salt
7. Sweet Potatoes
9. Cane
10. Tart
13. Tomorrow
17. Thiamine
18. Vegetables
19. Seed
20. Beet
23. Soil
26. Rice
28. Growth
29. Now
32. Carbohydrates
33. Fibers
34. Fit
36. Sugar
38. Niacin
39. Iodine
40. Yams

DOWN

1. Boil
2. Fruit
3. Protein
4. Pt.
6. Start
7. Strawberries
8. Tomatoes
11. Coffee
12. Cow
14. Oats
15. Egg
16. Teeth
18. Vigor
21. Ton
22. Nutrition
24. Leafy
25. Minerals
27. Carrots
28. Gums
30. Water
31. Lb.
33. Food
35. Energy
37. Grits
39. Iron

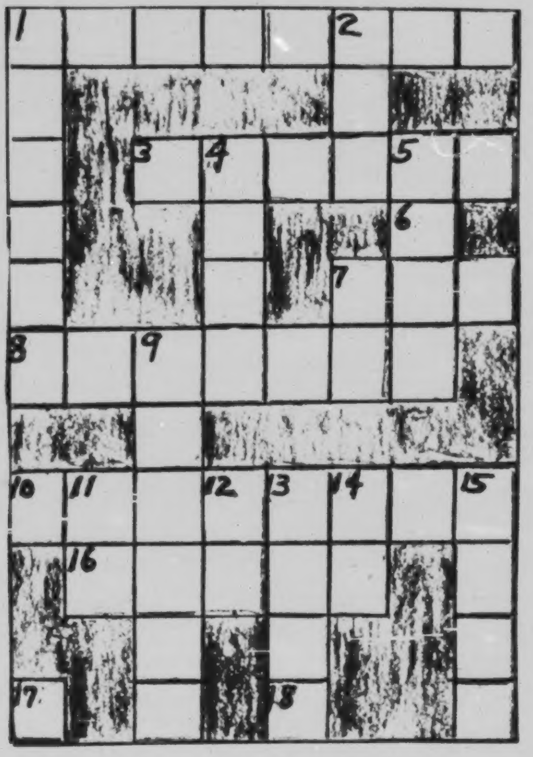
Appendix 3.2

PUZZLE: VITAMIN CROSSWORD PUZZLE

Level: Beginning Foods

Unit: Nutrition

This may be used as a pretest or review at the beginning of the study of nutrition.



ANSWERS

Across

1. Beriberi
3. Scurvy
6. E
7. Egg
8. Rickets
10. Vitamins
16. Fruit
17. C
18. K

Down

1. Butter
2. Ear
4. Cook
5. Vegs
7. Et
9. Citrus
11. If
12. Au
13. Milk
14. It
15. Soup

NUTRITION CROSSWORD PUZZLE

Across

1. Deficiency disease from lack of vitamin B.
3. Deficiency disease from lack of vitamin C.
6. Anti-sterility vitamin.
7. Protein food.
8. Deficiency disease from lack of vitamin D.
10. Protective foods.
16. Rich in vitamins.
17. Lack of this vitamin caused disease aboard ships in the 17th century.
18. Vitamin of value in clotting blood.

Down

1. Source of vitamin A.
2. Auditory organ.
4. To prepare food.
5. Foods rich in vitamins (abbreviation).
7. Latin for "and."
9. Kind of fruit rich in vitamin C.
11. Conjunction.
12. Chemical abbreviation for gold.
13. Nearly perfect food.
14. Pronoun.
15. Uses juice from cooked vegetables.

Appendix 4.0

*CAREER BINGO

1. Works with very special preparations of food, usually has advanced to this position after several years as a kitchen worker. Trade school is usually required.

2. Is engaged in a hotel, motel, hospital or other institution in a back of the house occupation which requires direction of several other people and account for the appearance and cleanliness of the place. The person may have a degree from a two year or a four year college or worked for a number of years as a maid.

3. Assists people with learning about which foods are necessary for good health. Usually this person has had a very short course pertaining to foods which people need and teaching methods.

4. Works with people needing assistance with fabrics, patterns and notions which will be used to create a garment. The individual usually has a high school diploma and clothing construction background.

5. Designs flowers for weddings, etc. Usually this person has a high school diploma and flower arrangement background.

6. Serves people food in various types of establishments from drive-in restaurants to hotel dining rooms. Generally has a high school diploma. (Waitress)

7. Assists people, especially the elderly, under institutional care, in performing simple tasks, making them comfortable and acting as a companion. Sometimes direction of recreational activities of a limited nature is undertaken. (Institutional aide)

8. Creates and developes designs for the interiors of commercial and residential buildings in accordance with desires and needs of clients. Position usually requires college degree and registration with professional association. (Interior designer)

9. Leads activities of a group interested in seeing some specified area during a definite period of time. Usually a high school diploma is required. (Tour director)

CAREER BINGO				
Institutional Aide	Chef	Tour Director	Dietitian	Demonstrator
Nutrition Aide	Institutional Housekeeper	Waitress	HERO	Interior Designer
Child Care Aide	Recreation Aide	HERO	Fashion Designer	Alterationist
HERO	Fabric Coordinator	Equipment Consultant	Child Psychologist	Upholsterer
Consumer Consultant	Floral Designer	HERO	Social Worker	Teacher Aide

*Barbara A. Border, Specialist, Home Economics Occupations, Arizona Department of Education

Appendix 4.11

DIRECTIONS

For the following statements, decide on the degree to which you agree or disagree with each statement and then mark that answer on the separate answer sheet. This should be how you personally feel about the statement, not how you think other people feel.

Example:

Statement: Work is a lot of fun.

Possible answers:

A. Strongly disagree
B. Disagree
C. Indifferent or don't know
D. Agree
E. Strongly agree

Choose the answer that comes the closest to the way you feel about the statement and mark it on the separate answer sheet. If you "strongly disagree" that work is a lot of fun, you would mark A as the answer by filling in the space under A with the special pencil.

Example:	A	B	C	D	E
	[]	[]	[]	[]	[]

If you "agree" that work is a lot of fun, you would mark D as the answer by filling in the space under D with the special pencil.

Example:	A	B	C	D	E
	[]	[]	[]	[]	[]

Answer every statement. Work quickly. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" that we want. Read each statement carefully, then answer it quickly and go on to the next item immediately. If you have any questions, raise your hand.

DO NOT TURN THE PAGE UNTIL YOU ARE TOLD TO DO SO.

A. Strongly disagree
B. Disagree
C. Indifferent or don't know
D. Agree
E. Strongly agree

1. I would work after marriage to have the money to live in a better community.
2. Women who have jobs are **not** really happy.
3. Working with others would be an important part of a job for me.
4. A chance to work with ideas is the ideal kind of job.
5. A job should have good opportunities for promotion.
6. I would work after marriage to have money to buy basic things.
7. Woman's place is in the home.
8. Opportunities to be helpful to others in my work are important.
9. A job that gives you a chance to create something new is the best kind of job.
10. Good fringe benefits would be one thing to look for in a job.
11. I would work after marriage to have money to buy essentials.
12. Women are too independent today.
13. Being of help to people would interest me.
14. A chance to show inventiveness in meeting new problems is important.
15. A job should have opportunities for early promotion.
16. I would work after marriage to meet financial responsibilities.
17. Most women are **not** interested in chances to help others through a job.
18. Helping people who are less fortunate is important to me.
19. Women should make their own decisions.

20. Retirement benefits would have to be satisfactory in order for me to consider taking a job.

21. I would work after marriage to have money to buy a home.

22. Most men are **not** interested in chances to help women advance in a job.

23. Working closely with people would interest me.

24. The chance to supervise activities is an important part of a job.

25. Work seems important to the people who are doing it.

26. I would work after marriage to have money for daily expenses.

27. Women are trying to imitate men.

28. Opportunities to be useful to society through my work are important.

29. Having influence on groups is important to me.

30. Making money is the best thing about having a job.

31. Women may hold jobs after they are married to buy more things for home and family.

32. Parents should encourage the idea of marriage and homemaking (rather than working) from childhood.

33. Working with people is preferable to working with things.

34. Married women should hold jobs so they can have a life of their own.

35. Status symbols (such as a personal office) make a job more attractive.

36. I would work in order to help put my children through college.

37. Most women dislike smart wormen.

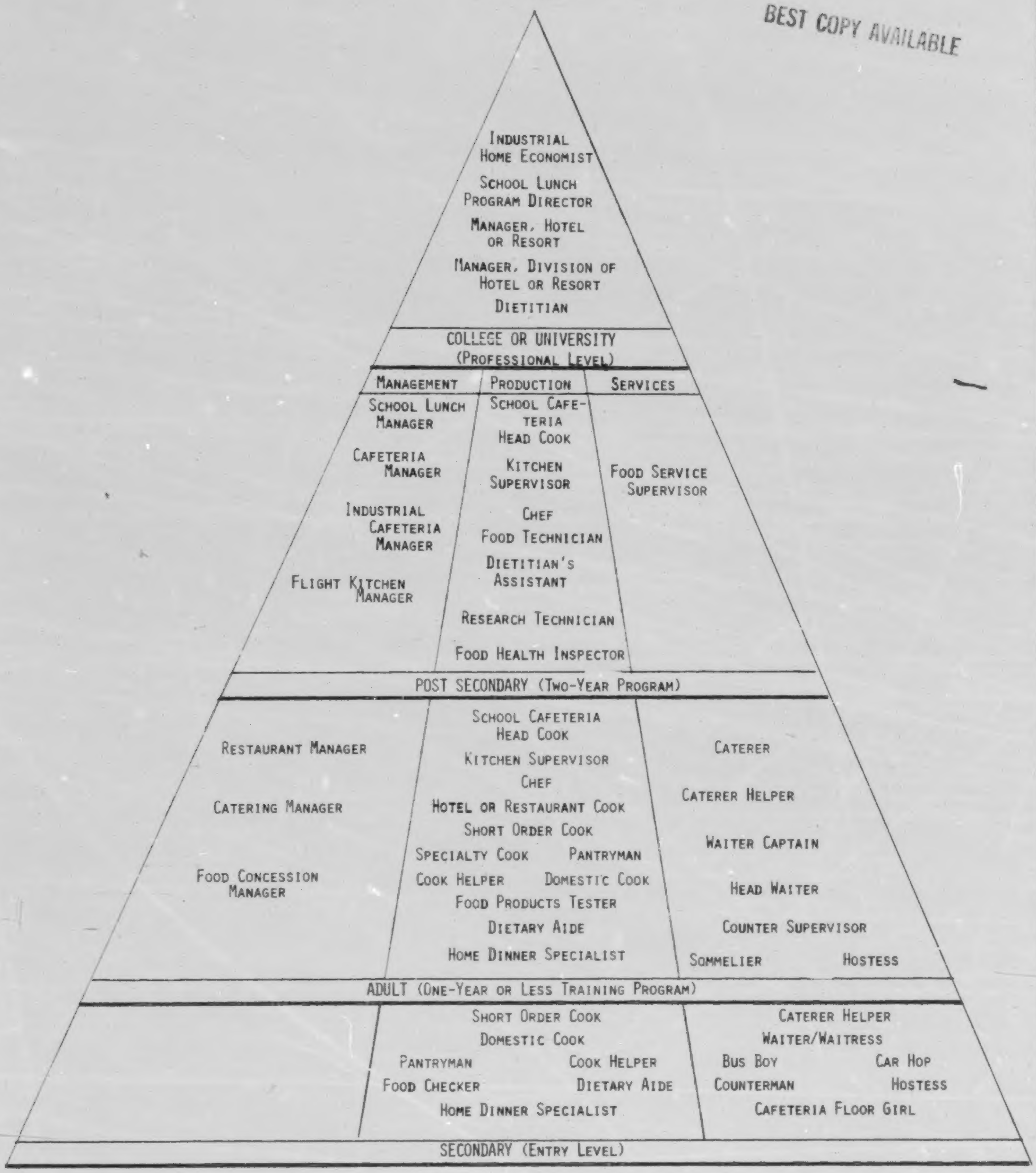
38. A job gives you a good opportunity to meet people.

39. A chance for self-expression is a good reason for taking a job.

40. Opportunity for increasing salary is an important feature of a job.

Taken from–*Women in the Work Force: Development and Testing of Curriculum Materials*
Center for Vocational-Technical Education–Ohio State University

FOOD MANAGEMENT AND PRODUCTION SERVICES
09.0203


Industrial Home Economist
School Lunch Program Director
Manager, Hotel or Resort
Manager, Division of Hotel or Resort
Dietitian
COLLEGE OR UNIVERSITY (Professional Level)
Management
Production
Services
School Lunch Manager
Cafeteria Manager
Industrial Cafeteria Manager
Flight Kitchen Manager
School Cafeteria Head Cook
Kitchen Supervisor
Chef
Food Technician
Dietitian's Assistant
Research Technician
Food Health Inspector
Food Service Supervisor
POST SECONDARY (Two-Year Program)
Restaurant Manager
Catering Manager
Food Concession Manager
School Cafeteria Head Cook
Kitchen Supervisor
Chef
Hotel or Restaurant Cook
Short Order Cook
Specialty Cook
Pantryman
Cook Helper
Domestic Cook
Food Products Tester
Dietary Aide
Home Dinner Specialist
Caterer
Caterer Helper
Waiter Captain
Head Waiter
Counter Supervisor
Sommelier
Hostess
ADULT (One-Year or Less Training Program)
Short Order Cook
Domestic Cook
Pantryman
Cook Helper
Food Checker
Dietary Aide
Home Dinner Specialist
Caterer Helper
Waiter/Waitress
Bus Boy
Car Hop
Counterman
Hostess
Cafeteria Floor Girl
SECONDARY (Entry Level)

Appendix 5.1

HOW WELL DID MARY MANAGE?*

Read the paragraph below on how Mary made her cookies and tell the steps which indicate good management and poor management.

Mary rushes into the room just as the bell rings and runs to her kitchen. Since she is cook, she gets out her planning sheet and starts to get out the equipment. She measures the shortening, salt, and soda carefully and puts them in the bowl. She breaks in the egg and adds the brown and white sugar and starts to mix. She then measures the flour by dipping a glass measuring cup into the canister and leveling it with her hand. She puts in the flour and mixes everything together. She then adds the chips and nuts and starts to put them on the cookie sheet when she sees the vanilla on the cabinet. She mixes it into the mixture. When she is finished putting the cookies on the sheet, she sticks them in the oven and turns it on to 350. She cleans the stove and helps the others while waiting for the cookies to get done. When the cookies are done she grabs the dish towel and takes them out of the oven. She lets them cool and divides them with the other girls. The bell rings so they put the cookie sheet in the sink and leave.

Recipe Mary made.

Chocolate Chip Cookies

1/2	cup shortening
1/2	cup sugar
1/4	cup brown sugar
1	egg
1	tsp. vanilla
1	cup sifted flour
3/4	t. salt
1/2	tsp. soda
1	cup chocolate chips
1	cup nuts

Directions: Cream shortening, sugars, egg and vanilla till light and fluffly. Sift together dry ingredients; stir into creamed mixture; blend well. Add chocolate and nuts. Drop from teaspoon 2 inches apart on a greased cookie sheet. Bake at 375° for 10 to 12 min. Remove immediately to cool on rack.

What did Mary and her group do?

List the steps which indicate good management	List the steps which indicate poor management

---

*Developed by Mrs. Patricia Matthews, Trevor Brown High School, Phoenix

Appendix 5.141

Ten Kitchen Safety Tips For Busy Mothers from the Coffee Information Institute

The kitchen can be the most dangerous room in the house for a curious toddler–especially if there are electric cords that can be put into the mouth, open outlets within reach, or appliances that can be pulled down from cabinet counter or table tops. The child who can reach the top of a range may be able to spill a pan of boiling water or scalding-hot grease over his body. Below counter-top level, there could be such hazards as toxic household chemicals and hot water pipes under the sink, cabinet drawers filled with sharp knives, or an oven hot enough to broil meat. In fact, most kitchens simply are not designed with small children in mind.

But for the busy homemaker who can't keep her eye on a curious child every second, here are some safety suggestions from the Coffee Information Institute:

1. Be sure that any electric outlets below counter-top level are covered or concealed. And don't allow electric cords to hang below the counter or table top.
2. Do not store sharp instruments, such a knives, or dangerous chemicals where small children can reach them.
3. Never allow the handles of pots or pans to extend over the edge of a kitchen range; keep them turned toward the rear or side of the stove. And when buying a kitchen range, make sure the heating units and controls are beyond the reach of small children.
4. Keep children away from kitchen areas that may be especially hazardous during meal preparation; a child playing on the floor beside a kitchen range is much more likely to be burned by any hot liquids that may be spilled.
5. When pouring hot liquids, always pour away from yourself; and pour very slowly. Instant coffees and soup mixes tend to effervesce when boiling water is poured too quickly.
6. Choose coffee cups or mugs that are designed so they will not tip easily. Some of the modern stemmed cups are attractive but tend to be "top heavy" so they are more likely to tip over and spill the contents.
7. When placing containers of hot foods or hot liquids on a table, put them as close to the center of the table as possible–or well away from the edge of the table. When small children are likely to be around, use place mats rather than a table cloth that can be pulled off the table along with containers of hot foods. And don't use lighted candles on the table when children are present.
8. Help make your kitchen accident-proof by adopting the perspective of a small child. Remember that a child may not be tall enough to see that a pot on the stove or a bowl on the table contains hot food. Also, if the child is allowed to play with pots and pans, he may think of the food containers on the kitchen range as his toys. If he sips fluids occasionally from an adult's cup, he may assume that the cup on the table is for his use.
9. Resist the temptation to hold a child in your arms while enjoying a cup of any hot beverage. A frisky child can knock the cup out of your hand in a fraction of a second. Put the youngster in his playpen, high chair, or some other safe place during your coffee break.
10. Finally, be sure you know what to do if an accident occurs in the kitchen despite your precautions. In case of burns, for example, the proper emergency treatment is to apply ice or cold water to the burn area. And keep your doctor's telephone number posted nearby so you can contact him quickly about any serious accident.

Most accidents are predictable and preventable. So make yourself a committee of one to keep the kitchen a happy room rather than a hazardous room.

From the: Coffee Information Institute, 18 East 48th Street, New York, NY 10017, 212-371-7860

Appendix 5.32

BE YOUR OWN HANDYMAN - - - STORAGE

Compiled By
Corrine Stinson, Home Management Specialist
University of Arizona
Tucson
and
Shirley Weik, Home Agent
Casa Crande

As soon as you begin to think of your home as a series of activity centers, you almost automatically start planning how to store in each center the tools, supplies and equipment you need there. Each activity center then becomes a storage center and it's up to you to find the best ways of storing things. This may mean a simple rearrangement, like hanging a saucepan over the stove instead of putting it in a pot closet. Or it can turn into a major construction job, with new shelves and cupboards and counters.

Whatever changes you make will depend on how much money, time and energy you want to spend. If you live in a rented house you may not think it worth while to invest much money. But with no money at all you can switch things around to save steps and labor.

HOW TO GO ABOUT PLANNING STORAGE

First, take a look at what you have to store.

A. Are the tools (or other things) really the ones you want? Decide what you really use and get rid of the rest.

B. Are they the best of their kind that you can afford? The best is usually a real labor saver . . . made of suitable material, safe to work with, often has more than one use.

C. Will duplicated or inexpensive items located in different centers increase efficiency?

D. Will extra containers for staples at the places where you need small quantities of them save you work?

Next, decide what to keep, what to add or replace.

Then, locate the best place for storing them. Base your decisions on the following guiding principles.

A. STORE THINGS USED MOST OFTEN IN THE MOST CONVENIENT POSITION where you don't have to bend or stretch or move something else out of the way to get them or put them back.

B. GROUP ACCORDING TO USE – STORE AT POINT OF FIRST USE. Instead of classifying things according to what they are–pans, dishes, groceries–classify them according to where you use them. Most saucepans, for instance are used first at the sink because you put water in them before placing them on the stove. See if you can arrange space for them near the sink or between the sink and the stove.

C. PLACE ALL ITEMS WITHIN SIGHT AND EASY REACH SO THAT SOMETHING ELSE DOES NOT HAVE TO MOVED TO GET AT THEM. If your grocery shelves are deeper than six inches, don't store the supplies more than one layer deep, unless the second layer is the same as the first. That is, you can put a can of tomatoes behind another can of tomatoes, but not behind a can of milk. Thus you will be able to see all your supplies at a glance, and you will never have to lift out one object to get at another. This is called one-motion storage.

D. PLACE ITEMS IN TERMS OF THEIR WEIGHT. Locate heavy ones close to where they will be used, lighter ones within a full arm's reach, only the very lightest ones which are used infrequently beyond your fingertips with arms outstretched.

E. STACK ONLY IDENTICAL ITEMS. Dishes should be stored in stacks of their own kind. Never put small bowls inside of larger bowls, if you can help it. Or small saucers on top of big ones. Build your shelves close together and store your serving bowls and platters one layer deep. Then, when you want the special bowl you just lift it right off the shelf, and not from a whole nest of bowls.

F. USE STORAGE DEVICES DESIGNED TO FIT THE ITEMS STORED. Shelves for canned goods or boxes or rice or beans or pancake flour should be from four to six inches deep. You can put very shallow racks two or three inches deep on the inside of cupboard doors to hold spices and small packages of foods. Most pans will fit very nicely on a twelve-inch shelf. The less you handle your dishes the smaller the chance of breakage, so don't put cups on hooks--set them in rows on shelves in twos. Don't nest glasses. Make rows of them two or three layers deep--provided the layers are all of the same kind.

G. PLACE ITEMS TOGETHER THAT ARE USED TOGETHER, for example, your toothbrush and dentifrice. Can you place your hand on your washcloth and towel without stretching and fumbling even with your eyes shut?

H. PLACE ITEMS WITH REGARD FOR TRAFFIC PATTERNS. Arrange door and drawer openings so that passageways are unobstructed. Arrange furniture too, so that it does not block your path to closets or cupboards.

I. KEEP EQUIPMENT AND STORAGE AS FLEXIBLE AS POSSIBLE. As your way of living grows and changes you may want to make adjustments.

J. CONSIDER SAFETY AND GOOD LIGHTING. To avoid strain, provide yourself with an adequate amount of light without glare.

K. SEPARATE POSSESSIONS USED BY DIFFERENT PEOPLE. If you share a room, work out a division of space that will help avoid conflicts.

HOW TO MAKE BEST USE OF AVAILABLE SPACE

Once you have decided what you want to store and how and where you want to store it, the next step is to provide the shelves and racks, etc. with which to do the job.

Some storage equipment can be purchased ready-made, either designed purposely for a specific use or readily adapted to various uses with little effort. Other things you may have to make yourself or have made for you.

Among commercial storage devices available are:

Rigid and collapsible step shelves
Free standing and hanging spice shelves
Record and magazine racks
Small plastic drawer cabinets
Hooks for cups and garments
Paper Dispensers
Vegetable bins
Blanket storage chests
Revolving shelves
Pegboards with shelf supports and hooks

Door shelves
Dish racks
Knife racks
Clips
Lid racks
Towel racks
File cabinets
Shoe racks
Garment bags
Cannister sets
Drawer dividers

Among those you can make or have made for you are:

Adjustable shelves or step shelves
Spice racks
Drawer dividers
Vertical file dividers for pie pans, etc.
Knife racks
Cannister sets
File drawers or boxes
Door shelves
Revolving shelves

The choice of which you use goes back again to how much money, time and energy you want to spend.

Reissued 1/64
C50

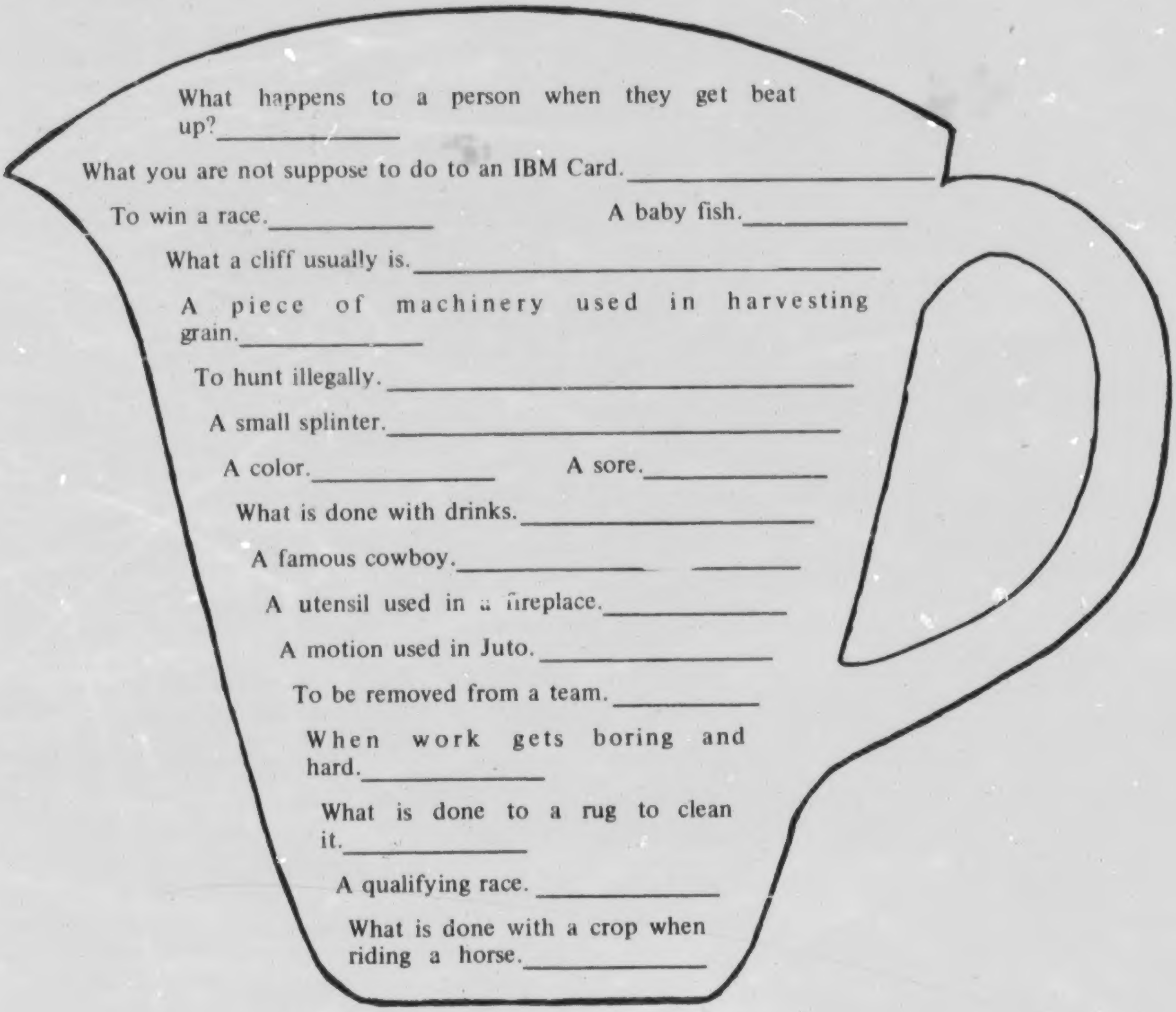
Appendix 5.41

COOKING TERMS MYSTERY*

Name ______________________________

Period ______________________________

House ______________________________



What happens to a person when they get beat up? ____________

What you are not suppose to do to an IBM Card. ____________________

To win a race. ___________

A baby fish. ___________

What a cliff usually is. ______________________________

A piece of machinery used in harvesting grain. ____________

To hunt illegally. ______________________________

A small splinter. ______________________________

A color. ____________

A sore. ____________

What is done with drinks. ____________________

A famous cowboy. ____________ _______

A utensil used in a fireplace. ____________

A motion used in Juto. _______________

To be removed from a team. ___________

When work gets boring and hard. ____________

What is done to a rug to clean it. ____________

A qualifying race. ____________

What is done with a crop when riding a horse. ____________

*Developed by Mrs. Patricia Matthews, Trevor Brown High School, Phoenix

Answers: Cream, Fold, Beat, Fry, Steep, Combine, Peach, Sliver, Brown, Boil, Stir or Toast, Mix, Grate, Chop, Cut, Grind, Beat, Heat, Whip.

Appendix 5.812

COST COMPARISON OF CONVENIENCE FOODS TO PREPARED FOODS*

Name ______________________ House ______________________

Period ______________________ Kitchen ______________________

Name of Product	Number of Pieces of Equipment Used	Total Time To Prepare (include mixing and baking)	Amount and Weight of Finished Product	Appearance of Finished Product	Flavor of Finished Product	Cost of Finished Product Include Cost of Time at 3¢ a min.

*Developed by: Mrs. Patricia Matthews, Trevor Browne High School, Phoenix

LOCAL RESOURCES FOR NUTRITION INFORMATION

Arizona Beef Council
4851 E. Washington
Phoenix, AZ 85034

Arizona Dietetic Association, Inc.
Central Arizona District – Phoenix
Southern Arizona District – Tucson

Arizona Heart Association
1720 East McDowell
Phoenix, AZ 85006

Arizona Public Service
Consumer Information
411 North Central
P.O. Box 21666
Phoenix, AZ 85036

Arizona State Department of Health
Nutrition Section
1717 West Adams
Phoenix, AZ 85007

Arizona State University
Department of Home Economics
Tempe, AZ 85281

Cooperative Extension Service
University of Arizona
Tucson, AZ 85721
County Cooperative Extension Offices

Dairy Council of Arizona
3737 East Indian School
Phoenix, AZ 85018

717 North Swan Road
Tucson, AZ 85711

Maricopa County Health Department
Nutrition Section
1825 East Roosevelt
Phoenix, AZ 85006

Northern Arizona University
Department of Home Economics
Flagstaff, AZ 86001

Pima County Health Department
Nutrition Section
151 West Congress
Tucson, AZ 85701

Salt River Project
Home Economics Department
P.O. Box 1980
Phoenix, AZ 85001

University of Arizona
School of Home Economics
Tucson, AZ 85721

PARTIAL LISTING OF SOURCES OFFERING EDUCATIONAL MATERIALS

American Bakers Association
Public Relations Department
Suite 650
1700 Pennsylvania Avenue, N.W.
Washington, DC 20006

American Dental Association
211 East Chicago Avenue
Chicago, IL 60611

American Diabetes Association
1 East 45th Street
New York, NY 10017

American Dietetic Association
620 North Michigan Avenue
Chicago, IL 60611

American Dry Milk Institute, Inc.
Research Education
130 North Franklin Street
Chicago, IL 60606

American Egg Board
(Poultry & Egg National Board)
205 Touhy Avenue
Park Ridge, IL 60068

American Frozen Food Institute
Communications Division
Suite 600
111 East Wacker Drive
Chicago, IL 60601

American Heart Association
44 East 23rd Street
New York, NY 10010

American Home Economic Assoc.
2010 Massachusetts Avenue, N.W.
Washington, DC 20036

American Institute of Baking
Nutrition Education Department
400 East Ontario Street
Chicago, IL 60611

American Meat Institute
Department of Public Relations
59 East Van Buren Street
Chicago, IL 60605

American Medical Association
535 North Dearborn Street
Chicago, IL 60610

The American National Red Cross
Food and Nutrition Consultant
National Headquarters
Washington, DC 20006

Armour and Company
Consumer Service Department
111 West Clarendon
Phoenix, AZ 85077

Arthritis Foundation
1212 Avenue of the Americas
New York, NY 10036

Ball Brothers Company, Inc.
Consumer Service Department
Muncie, IN 47302

Best Foods
Division of CPC International Inc.
Consumer Services
International Plaza
Englewood Cliffs, NJ 07632

Borden, Inc.
50 West Broad Street
Columbus, OH 43215

Campbell Soup Company
Food Service Products Division
375 Memorial Avenue
Camden, NJ 08101

Canned Salmon Institute
1600 South Jackson Street
Seattle, WA 98144

Carnation Company
Carnation Food Services Center
5045 Wilshire Boulevard
Los Angeles, CA 90036

Cereal Institute, Inc.
135 South La Salle Street
Chicago, IL 60603

Continental Baking Company
Home Economics Department
P. O. Box 731
Rye, NY 10580

Corn Products Company
Medical Department
International Plaza
Englewood Cliffs, NJ 07632

Dairy Council of Arizona
3737 East Indian School, Suite 401
Phoenix, AZ 85018

Dairy Council of Arizona
717 North Swan Road
Tucson, AZ 85711

Del Monte Corporation
215 Fremont Street
P. O. Box 3575
San Francisco, CA 94119

Evaporated Milk Association
Home Economics Educational Services
910 Seventeenth Street, N.W.
Washington, DC 20006

Family Circle Magazine
Bette Stack
488 Madison Avenue
New York, NY 10022

Florida Department of Citrus
Florida Citrus Commission
Lakeland, FL 33802

Food and Drug Administration
U.S. Department of Health,
Education & Welfare
Washington, DC 20025

Food and Nutrition Board
National Research Council
2101 Constitution Avenue
Washington, DC 20025

General Electric
Manager - Home Economics
Housewares Business Division
1285 Boston Avenue
Bridgeport, CT 06602

General Foods Kitchens
General Foods Corporation
250 North Street
White Plains, NY 10625

General Mills
Betty Crocker Kitchens
P. O. Box 1113
Minneapolis, MN 55440

Gerber Products
Professional Communications Department
445 State Street
Fremont, MI 49412

Green Giant Company
Home Services Department
5601 Green Valley Drive
Minneapolis, MN 55437

Grocery Manufacturers of America, Inc.
1425 K Street, N.W.
Washington, DC 20005

H. J. Heinz Company
P. O. Box 57
Pittsburgh, PA 15230

Household Finance Corporation
Money Management Institute
Prudential Plaza, Suite 3200
Chicago, IL 60601

Hunt Wesson Foods
Educational Services
1645 West Valencia Drive
Fullerton, CA 92634

Kellogg Company
Home Economics Services
Battle Creek, MI 49016

Kerr Glass Manufacturing Corporation
Research and Educational Department
Consumer Products Division
Sand Springs, OK 74063

Kraft Foods
Educational Department
P. O. Box 6567
Chicago, IL 60680

Leslie Foods, Inc.
Home Economics Department
Consumer Services
505 Beach Street
San Francisco, CA 94133

Libby, McNeill & Libby
Mary Hale Martin Department
200 South Michigan Avenue
Chicago, IL 60604

Mead Johnson and Company
Product Public Relations
Evansville, IN 47712

Metropolitan Life Insurance Company
Health Education Editor
1 Madison Avenue
New York, NY 10010

National Canners Association
Home Economics - Consumer Services
1133-20th Street, N.W.
Washington, DC 20036

National Dairy Council
111 North Canal Street
Chicago, IL 60606

National Fisheries Institute
Promotions Division
111 East Wacker Drive, Suite 600
Chicago, IL 60601

National Livestock & Meat Board
36 South Wabash Avenue
Chicago, IL 60603

National Macaroni Institute
P. O. Box 336
Palatine, IL 60067

National Turkey Federation
P. O. Box 69
Mount Morris, IL 61054

The Nestle Company, Inc.
Home Economics Department
100 Bloomingdale Road
White Plains, NY 10605

Nutrition Foundation
99 Park Avenue
New York, NY 10016

Oscar Mayer & Company
Research Department, Nutrition Section
P. O. Box 1409
Madison, WI 53701

Ocean Spray Cranberries, Inc.
Consumer Relations Department
Hanson, MA 02341

Pacific Coast Canned Pear Service, Inc.
217 Sixth Avenue, North
Seattle, WA 98109

Pacific Vegetable Oil Corporation
Saffola Products Division
World Trade Center
San Francisco, CA 94111

Pan-American Coffee Bureau
Consumer Information
120 Wall Street
New York, NY 10005

Pet Incorporated
Pet Plaza
400 South Fourth Street
St. Louis, MO 63166

Pepperidge Farm, Inc.
Public Relations Department
Norwalk, CT 06856

The Pillsbury Company
Department of Nutrition
840C Pillsbury Building
Minneapolis, MN 55402

The Popcorn Institute
111 East Wacker Drive
Chicago, IL 60601

Procter and Gamble Company
Supervisor, Educational Services
P. O. Box 599
Cincinnati, OH 45201

Public Affairs Committee, Inc.
Director of Education
381 Park Avenue, South
New York, NY 10016

The Quaker Oats Company
Consumer Service Department
345 Merchandise Mart
Chicago, IL 60654

Ralston Purina Company
Checkerboard Kitchens
Checkerboard Square, Dept. 209
St. Louis, MO 63188

Reynolds Aluminum
Manager, Consumer Affairs
Reynolds Metals Company
Richmond, VA 23261

Rice Council of America
P. O. Box 22802
Houston, TX 77027

Rival Manufacturing Company
36th and Bennington
Kansas City, MO 64129

Standard Brands Educational Service
P. O. Box 2695
Grand Central Station
New York, NY 10017

Stokely-Van Camp, Inc.
Home Economics Department
941 North Meridian Street
Indianapolis, IN 46206

Sunkist Growers, Inc.
Consumer Services
Box 7888, Valley Annex
Van Nuys, CA 91409

Swift & Company
Martha Logan, Home Economist
1919 Swift Drive
Oak Brook, IL 60521

Tuna Research Foundation, Inc.
Study Program, Suite 1100
551 Fifth Avenue
New York, NY 10017

Tupperware Home Parties
Educational Services Program
Orlando, FL 32802

U. S. Department of Agriculture
Institute of Home Economics
Agriculture Research Service
Washington, DC 20025

U. S. Department of Agriculture
Superintendent of Documents
U. S. Government Printing Office
Washington, DC 20402

United Fresh Fruit & Vegetable Association
Educational Materials
P. O. Box 510
Dansville, NY 14437

Universal Foods Corporation
Red Star Yeast
Home Service Department
433 East Michigan Street
Milwaukee, WI 53201

Vitamin Information Bureau, Inc.
383 Madison Avenue
New York, NY 10017

Wear-Ever Aluminum, Inc.
Subsidiary of Alcoa
Public Relations Department
1089 Eastern Avenue
Chillicothe, OH 45601

West Bend Company
Consumer Information Department
West Bend, WI 53095

Wheat Flour Institute
14 East Jackson Boulevard
Chicago, IL 60604

PUBLICATIONS ON CURRENT NUTRITION INFORMATION

DAIRY COUNCIL DIGEST

National Dairy Council
111 North Canal Street
Chicago, IL 60606

Published bimonthly. Available upon request of local Dairy Council Unit, 2618 South 21st Street, Phoenix, AZ 85034.

FOOD AND NUTRITION NEWS

National Livestock and Meat Board
36 South Wabash Avenue
Chicago, IL 60603

Published Monthly. Available upon request.

ILLINOIS TEACHER

342 Education Building
University of Illinois
Urbana, IL 61801

Published six times each year. Subscription $5.00 per year, $1.00 single copies.

JOURNAL OF NUTRITION EDUCATION

P.O. Box 931
Berkeley, CA 94701

Published quarterly. Subscription $6.00 per year, $1.75 single copies.

NUTRITION NEWS

National Dairy Council
111 North Canal Street
Chicago, IL 60606

Published four times each year. Available upon request of local Dairy Council Unit, 2618 South 21st Street, Phoenix, AZ 85034.

NUTRITION NOTES

United Fresh Fruit and Vegetable Association
777–14th Street, N.W.
Washington, D.C. 20005

Published four times a year. Available upon request.

NUTRITION PROGRAM NEWS

Consumer and Food Economics Research Division
Agricultural Research Service
United States Department of Agriculture
Washington, D.C.

Published bimonthly in consultation with the Interagency Committee on Nutrition Education. Available upon request.

NUTRITION TODAY

1140 Connecticut Avenue, N.W
Washington, D.C. 20036

Published bimonthly. **Eligibility**: Physicians, dietitians, nutritionists, nurses, home economists, and other selected health professionals in the United States and Canada are eligible to receive the magazine without charge upon request. A certain number of copies are distributed abroad without charge. Requests must be sent on professional letterhead or indicate professional standing. Persons ineligible as above, pay a subscription rate of $6.00 per year, single copies $1.50.

EXPLANATION OF TERMS

Definitions used by people in the field of nutrition frequently have an emphasis unique to that profession. Listed below are many of what have become the "working definitions" accepted and employed in the specific field. These have been adapted from numerous authoritative sources.

Acne vulgaris – a simple uncomplicated condition resulting in a raised eruption on the skin due to inflammation, with accumulation of secretion, of the oil-secreting or sebaceous glands.

Allergy, food – hypersensitiveness to a substance in food which is ordinarily harmless in similar amounts for the majority of persons.

Amino acids – the nitrogen-containing acids obtained when protein materials are broken down chemically. The differences between proteins are largely a matter of the number, the kind, and the arrangement of such amino acids within the protein substances.

Amino acids, essential – amino acids which need to be included in the diet, i.e., which either cannot be synthesized in the body or not at a rate sufficient to meet the need.

Anemia – a reduction in the amount of hemoglobin in the blood or in the number of red corpuscles of the blood.

Appetite – the inclination or desire to eat; distinguished from hunger as the drive to eat.

Ascorbic acid – (see Vitamin C.)

Ash – the total mineral matter residue after ignition of a food; always either neutral or alkaline, since acid in excess of that which can be neutralized is volatilized.

Atherosclerosis – a degeneration of the blood vessels caused by a deposit of fatty materials along the lining of the wall of the blood vessel. Cholesterol is one of these fatty materials.

Bacterial action – changes produced by one-celled microorganisms such as those involved in fermentation, synthesis of vitamins, soil fertilization, decay of organic matter, and many diseases.

Calorie (large or kilocalorie) – the unit used to express food energy; the amount of heat required to raise the temperature of one kilogram of water one degree Centigrade.

Carbohydrates – a large group of chemical substances containing carbon, hydrogen, and oxygen; forms commonly seen are starch and various kinds of sugar.

Cardiovascular – pertaining to heart and blood vessels.

Carotene – provitamin A. A yellow-red plant pigment occurring in several forms; B-carotene is the most abundant form in common green leafy and yellow vegetables.

Cellulose – a constituent of the cell walls of plants forming the basis for vegetable fiber; chemically, a carbohydrate having about the same percentage composition as starch.

Cholesterol – the most common member of the group of sterols (complex, fatlike substances that can be dissolved in ether and other fat solvents); present in many foods and can be made within the body.

Congenital – existing at birth, referring to certain mental or physical traits, perculiarities, or diseases.

Connective tissue – (see Tissue.)

Dental caries – the progressive decay of tooth structures.

Emotional disturbances – an interruption of ability to resist forces which tend to arouse strong feelings; a disturbed mental state resulting in agitation and confusion.

Emotional stability – ability to resist forces which tend to arouse strong feelings or disturbed mental states.

Environment – the conditions and influences under which one lives. Everything that conditions the life process except the hereditary or genetic factors.

Fats – the name given to a group of chemical substances composed of the same three elements as carbohydrates, namely, carbon, hydrogen, and oxygen, but in different proportions; fats constitute a much more concentrated form of food energy. Fats have an oily texture and are not soluble in water.

Fatty acid – organic compound of carbon, hydrogen, and oxygen, which combines with glycerol to make fat.

Fermentative – relating to chemical change that takes place in an organic substance caused by certain fungi, bacteria, and enzymes, and is accompanied by evolution of gases often evidenced by hissing and bubbling.

Flour, enriched – white flour enhanced in thiamine, riboflavin, niacin, and iron value by changing the milling process to retain these constituents or by addition of the chemicals to white flour. The minimum levels specified in the standards of identity promulgated under the Food, Drug and Cosmetic Act are: thiamine, 2.0 mg.; riboflavin, 1.2 mg.; niacin, 16 mg.; and iron, 13 mg. per pound. Certain levels of vitamin D and calcium are permitted as optional ingredients. States which require enrichment of white flour have generally been guided by the federal legislation.

Food – any substance which may be used to yield energy; to build or renew body tissue; or to regulate body processes and internal conditions, so as to maintain a right internal environment for life.

Niacin, or nicotinic acid – a water-soluble heat-stable member of the vitamin B complex; needed for the use of the nutrients by the tissues. The antipellagric factor.

Nutrient – a substance which takes part in any of the three ways by which food nourishes the body. Some nutrients function in more than one of these ways.

Nutrition – the combination of processes by which the living organism receives and utilizes the materials necessary for the maintanance of its functions and for the growth and renewal of its components.

Nutrition, normal – a condition of the body resulting from the efficient utilization of sufficient amounts of the essential nutrients provided in the food intake.

Nutritional status – the condition of the body resulting from the utilization of the essential nutrients available to the body. Nutritional status may be good, fair, or poor, depending not only on the intake of dietary essentials but on the relative need and the body's ability to utilize them.

Nutriture – used interchangeably with nutritional status; the condition of physical health and well-being of the body as related to the consumption and utilization of food for growth, maintenance and repair.

Obesity – excessive overweight due to the presence of a surplus of fat.

Overweight – an excess of more than 10 percent above the desirable weight.

Physiological – relating to the normal vital processes of animal and vegetable organisms.

Plasma – the colorless fluid portion of the blood in which the cells are suspended.

Polyunsaturated – refers to a class of fatty acids that have more than one unsaturated linkage in the chain, each lacking 2 hydrogens. Saturated fatty acids have all the hydrogens the carbon chain can hold.

Precursor – a substance which is converted into another. For example, the carotenes are precursors of vitamin A.

Proteins – nitrogenous compounds which yield amino acids on hydrolysis; essential constituents of all living cells, and the most abundant of the organic compounds in the body.

Protein, complete – one which contains all of the essential amino acids, i.e., those which must be supplied preformed in food.

Protein, incomplete – one which is completely lacking in one or more of the essential amino acids which must be supplied preformed in food.

Protein, supplementary effect – the ability of one protein to supply amino acids in which another protein is deficient, so that from the mixture of the proteins an adequate intake of amino acids is secured.

Provitamin – a substance which may be converted into a vitamin; thus, the carotenes are provitamins A.

Pulses – edible seeds of various leguminous crops, as peas, beans, lentils, etc. Commonly used in combination with the term proteins, as "pulse proteins," meaning leguminous proteins.

Radioactive – giving off atomic energy in the form of radiations, such as in the alpha, beta, or gamma rays.

Riboflavin, or vitamin B_2 – vitamin of the B complex; soluble in water, not easily destroyed by heat but destroyed by visible light; a yellow pigment having a green fluorescence and essential for utilization of nutrients in the tissues.

Salt, iodized – table salt (sodium chloride) to which has been added one part per 10,000 of iodine as potassium iodide.

Serum – the colorless fluid portion of the blood that separates when blood clots.

Starvation – long-continued unsatisfied hunger; the condition of suffering or dying from lack of food.

Syndrome – a medical term meaning a group of symptoms that occur together.

Thiamine, or vitamin B_1 – vitamin of the B complex; soluble in water, destroyed by heat, essential for growth and the use of carbohydrate in the body.

Thyroid gland – a ductless gland lying in front of the upper part of the windpipe; furnishes an internal secretion which influences the rate of metabolism.

Tissue – a collection of cells or derivatives of cells, forming a definite structure. Examples are *adipose* or *fatty tissue,* a structure consisting chiefly of fat droplets; *muscle tissue,* composed chiefly of long, thin fibers or muscle cells embedded in a thin, delicate connective-tissue membrane.

Tissue, connective – a tissue holding together and in place other, usually more active tissues, as, for example, muscle fibers or the cells of the glands.

Tonus (tone) – a sustained state of partial activity such as exists in varying degrees in live muscles at all times.

Utilization of food – (see Food.)

Vascular – full of vessels that contain a fluid. In physiology, the blood and lymph vessels in the body.

Vitamins – substances that are: *(a)* distributed in foods in relatively minute quantities; *(b)* distinct from the main components of food (i.e., proteins, carbohydrates, fats, mineral salts, water), *(c)* needed for the normal nutrition of the animal organism, and *(d)* so essential the absence of any one will cause a corresponding specific deficiency disease. At least 8 of the 20 known vitamins are needed by man, or are of undoubted clinical significance.

Vitamin A value – the combined potency of a food or diet, represented by its content of vitamin A, carotene, and other plant precursors (of vitamin A).

Food energy value – refers to the carbohydrate, fat, and protein content of the diet, since these constituents release energy as they are broken down in the cells of the body; commonly expressed as calories, since heat is a measurable by-product of the energy released when the carbohydrate, fat, and protein are broken down.

Food, fortified – a food to which a vitamin or other dietary essential has been added in such an amount as to make the total content of the dietary essential larger than that contained in any natural (unprocessed) food of its class, for example, vitamin D milk and fortified margarine.

Food, utilization of – refers to the process by which ingested food is digested, absorbed, distributed, and assimilated by the cells of the body.

Fortified margarine – (see Margarine.)

Glycerol – serves as the backbone radical or framework of the fat molecule, permitting the attachment of three fatty acids.

Goiter, simple – enlargement of the thyroid gland, caused by an absolute or relative deficiency of iodine.

Hemoglobin – the red coloring matter of the blood found in the red blood cells; contains iron and is capable of uniting loosely with oxygen.

Heredity – the tendency of any living thing to reproduce the characteristics of its ancestors.

Hunger – a strong drive for food.

Ingestion – the introduction of food or drink into the stomach.

International Unit – a unit of measure established by a committee appointed by the Health Organization of the League of Nations, used for expressing the content of vitamins in foods and other materials; usually dropped when vitamin values can be conveniently expressed in weight but now used mainly for vitamins A and D. The recommended allowance for vitamin D for infants and children, including adolescents, and for women during pregnancy and lactation, is 400 International Units per day.

Iodized salt – (see Salt.)

Lactation – the period following childbirth during which milk is produced by the mammary glands of the breasts.

Lactic acid – a three-carbon organic acid formed as an intermediary in carbohydrate metabolism; produced by certain kinds of bacteria when acting on food residues, particularly milk.

Linoleic acid – one of the digestion products from certain fats; essential to body tissues; a polyunsaturated fatty acid which the body apparently cannot make and hence it must be provided by the food ingested.

Malnutrition – a condition of the body resulting from an inadequate supply or impaired utilization of one or more of the essential food constituents.

Margarine, fortified – margarine with vitamin A added. The margarine on the market in the United States is fortified with 15,000 I.U. of vitamin A per pound.

Maturation – the process of coming to full development, maturity, or adulthood.

Membrane, mucous – tissue lining the passages which lead into and out of the body and which secrete a clear viscid substance; examples are the digestive, respiratory, and urinary tracts.

Mental activity – the functional activity of the mind.

Metabolism – a general term to designate all chemical changes which occur to substances within the body after absorption. These changes include constructive (anabolic) and destructive (catabolic) processes.

Metabolism, intermediary – the transfers and chemical changes undergone by nutrients after digestion and absorption.

Milk, vitamin D – milk processed or produced to provide vitamin D; may be produced by three different methods:

1) "fortified" milk, which is now more generally distributed than the other types, is that to which a vitamin D concentrate has been added;
2) "metabolized" milk is produced by feeding the cows irradiated yeast; and
3) "irradiated" milk has been exposed directly to ultraviolet rays.

The standard amount used for fortification is 400 I.U. of vitamin D per quart of fresh or reconstituted milk.

Minerals – "inorganic elements." The following are known to be present in body tissues; calcium, cobalt, chlorine, copper, fluorine, iodine, iron, magnesium, manganese, phosphorus, potassium, sodium, sulfur, and zinc. These constituents, obtained from food, aid in the regulation of acid-base balance of body fluids and of osmotic pressure, in addition to the specific function of individual elements in the body. Some minerals are present in the body largely in organic combination, as iron in hemoglobin, and iodine in thyroxine; others occur in the body in inorganic form, as calcium salts in bone, sodium and chlorine as sodium chloride. The terms "minerals" and "inorganic elements" do not imply that the elements occur in inorganic form in food or body tissue.

Neuromuscular tremor – a trembling or shaking produced by nerve stimulation of contractile tissues of the body by which movements of the various organs and parts are affected.

Vitamin B complex – as originally used, this term referred to the water-soluble vitamins occuring in yeast, liver, meats, and whole-grain cereals, but some of the newer B complex vitamins – for example, folic acid and vitamin B_{12} – do not correspond to this distribution; includes a number of factors which have been identified, isolated, and synthesized, viz., thiamine, riboflavin, nicotinic acid, vitamin B_6, pantothenic acid, biotin, folic acid, inositol, and choline; vitamin B_{12}, which has been crystallized . . .and others which have been only partially demonstrated or identified.

Vitamin C – a water-soluble vitamin easily destroyed by exposure to the oxygen of the air; a white crystalline solid with a sour taste; concerned specifically with the maintenance of cement-like substances which hold cells together throughout the body; deficiencies are manifest in ruptured blood vessels, loose teeth, and poorly calcified bones.

Vitamin D – designates a group of fat-soluble factors which help to utilize calcium and phosphorus.

Vitamin D milk – (see Milk.)

Vitamins, fat-soluble – vitamins A, D, E, and K, which are extractable from foods with fat solvents.

Vitamins, water-soluble – members of the B complex and vitamin C which can be extracted from foods with water as a solvent.

During the summer of 1973 a graduate nutrition class was held at Arizona State University which incorporated one week of basic nutrition information (using programmed learning materials) and one week of creative teaching techniques. The members of the class developed teaching techniques which they could apply to their own teaching situations. The techniques in this booklet are compiled and edited from class developed materials.

Class Members

Connie Gray
Carole Gubser
Gloria Harris
Carol Knight
Susanna Lam
Lois Mazur
Valerie Plumlee
Barbara Porter

Helen Rasmussen
MarJune Scheier
Ann Sherwood
Marjorie Stevenson
Elaine Thompson
Carmen Waetje
Elaine Weiss
Shirley Wolfe

Editor

Nancy F. Dillon
Assistant Professor
Home Economics Department
Arizona State University

TABLE OF CONTENTS

Level Page

1. Food And The World

9th Emergency Situation - Interlinear Device 2
high school Ecology - Debate 4
high school Food In The Future - Computer and In-basket Techniques 5

2. Food And Growth

7th & 8th Nutrients Retention - Interlinear Device 7
9th Nutrients - Programmed Learning 9
high school Vitamin C - Film Loop 16
adult Dark Leafy Greens -Living Charts 18

3. Food For Life

7th & 8th Energy - Set Induction 20
high school Microorganisms In Food - Programmed Learning 21

4. Food For People

7th Researchers - Videotape Survey 26
high school Weight Control - Problem Situation 29
high school Weight control - Interlinear Device 31

FOOD AND THE WORLD

Emergency Situation - Interlinear Device

Level: 9th Grade Foods

Preceded by a unit on meal planning, preparation and selection.

PERFORMANCE OBJECTIVE	CONCEPTUAL STATEMENT	LEARNING EXPERIENCE
Following a unit on meal planning, 9th grade students will be able to identify food choices during an emergency situation by planning 2 meals for a family of 4 that include all the needed nutrients.	Consideration of the nutritional needs of one's family will help in planning nutritious meals.[1]	Interlinear device *EVALUATION

*This device is planned in lieu of a unit test on meal planning.

Read the following story and pretend that you are Mary. You are to be as creative as you possibly can in planning and preparing the meals for the family. Record your plans on the next page.

Mary's family has been in a flood which hit their small town and it will be two more days before the Red Cross will reach the town with food supplies. The families have returned to their homes and are trying to make an effort to resume a semblance of "normal" living in that situation. The roads are impassable and no one can reach the grocery stores by car or truck. The electricity has been cut off and all perishable items have spoiled.

Mary, 16, is in charge of fixing two meals for her family of four during the next two days. Her parents are working hard trying to clean up the house and their property. As they returned to their home, she finds that the refrigerator contains: 1# spoiled hamburger, ½ head wilted lettuce, 1 tomato, 2 carrots, 2 quarts of sour milk, and 3 slices of cheese.

On the cupboard shelf is a partial bag of macaroni, a can of cream of mushroom soup, a can of tuna, 1 can of tomato paste, a partial box of rice and an unopened box of oatmeal, one box of dry skim milk and a partial loaf of bread. These foods were not damaged by the water.

Mary faces yet another situation for the water is contaminated and has to be boiled to purify it, but there is no electricity. Think of a way that Mary could purify the water she needs for today and prepare the meals for her family.

Decide what Mary could serve for the meals today and what special considerations she will need to take into account before preparing these meals. It would be possible for Mary to walk to the store, but only canned items would be available and the selection would be very limited. If Mary goes to the store for groceries, star the items she purchased. List special considerations for each meal. This would include a step-by-step sequence of the meal preparation.

Interlinear Device (continued)

Meal #1 Meal #2

List special considerations to be taken into account during the planning and preparation.

List the step-by-step procedure for preparation.

Why did you make the decisions you did?

This completes the unit on meal planning. The students would be ready to begin study into another area such as Child Development, where they could be able to apply principles learned in this unit in planning nutritious meals and snacks for small children.

Ecology - Debate

Level: Sophomores and Juniors

Preceding Study: The development of food consumption patterns in the United States.

PERFORMANCE OBJECTIVE	CONCEPTUAL STATEMENT	LEARNING EXPERIENCE
The students will debate a proposal related to the control of food for better nutrition, the use of commodities, and the issues related to ecology.	Availability plays a primary role in determining food choice. The economic situation is a potent factor in determing how much and what kinds of food will be available to individuals in every country.[2]	Small groups will select one of the topics for debate, research the issue, interview selected community leaders in related positions of leadership, as well as survey consumers for their ideas on the topic. After the debate the group will make positive recommendations for the solution of the problem.

1. People should have the right to select the kind and amount of food they wish, or can afford for psychological and personal satisfactions.

2. People must learn to limit the amounts of food and use great care in the selection of foods to reduce shortages and preserve ecology.

3. Our government should control nutrition through a variety of means, one of which might be selecting the foods we eat and making all nutritional considerations as well as distributing commodities, and decreasing waste.

The next study could relate the socio-psychological aspects of food to the nutritive quality of food.

Food In The Future - Computer and In-basket Techniques

Level: High School

This unit could be used before the study of nutrients or it could be used as a review after studying the nutrients needed by the body.

PERFORMANCE OBJECTIVE	CONCEPTUAL STATEMENT	LEARNING EXPERIENCE
Given a life style in a future oriented unique situation the students will be able to use their nutrition knowledge to develop a food plan which will supply all the needed nutrients.	An individual's perception of a food is fundamentally determined by learnings from past sensory experiences and related socio-cultural knowledge. This knowledge takes the form of symbolic meanings attached to foods and their use. Changing situations and new experiences may alter an individual's perception of a food.[3]	Use of the computer with in-basket techniques. *EVALUATION Students will share knowledge gained from solving life style problems.

Working in small groups, students will select one of the following situations:

A family dwelling on the ocean floor
A group of research scientists living on the moon
An Alaskan family living 100 miles away from Nome
A group of people planning a 2 week back-pack trip into the Sierras

The student groups will establish the number age of the people, and sex, and how long the group will live in this environment. It will then be necessary for each group to prepare a list of foods, including the form in which the foods will be stored, which will meet the necessary nutrient needs of each individual during the time the group will live in this environment. This information will be stored in the computer and meals can be selected using supplies (amounts used up and still available can be programmed on the computer) on hand. In-basket situations as the following can be used:

(a) The family living on the ocean floor suddenly has a problem with the power supply and they cannot use their remaining power supply for cooking. Food must be served during this 3 day period. What will be served to meet the nutrient needs?

(b) The water supply for the moon scientists has become polluted so other liquids must be substituted in the preparation of food for the remainder of the stay on the moon.

(c) Four men who are nearly frozen to death and starving locate an isolated home 100 miles from Nome in a blinding blizzard with tempertures of 50 degrees below 0. The storm lasts 1 week. How are the extra people to be fed? (Keep in mind the nutrient needs of each person and the conceptual statement)

(d) How would the food supply be altered if the food to be carried had to be equally distributed on back-packs or a second alternative would be what would they take if a mule were to carry the food?

Follow Up:

This unit can be quite complete in terms of studying nutrients and solving life style problems so the students might next study the cultural aspects of food.

FOOD AND GROWTH

Nutrient Retention - Interlinear Device

Level: 7th and 8th Grade

Preceding Teaching Technique: I would use this technique to introduce the unit on cooking principles and the importance of nutrient retention.

PERFORMANCE OBJECTIVE	CONCEPTUAL STATEMENT	LEARNING EXPERIENCE
Student will be able to locate all mistakes in the interlinear device and make needed corrections as related to cooking principales.	Methods of preparing various foods may affect the retention of certain nutrients in the finished products[4]	Interlinear device is used as a pretest. *EVALUATION

*Evaluation will be done through a class discussion on what mistakes the students were or were not able to find in the interlinear device. Students would discover their need for further knowledge of nutrient retention through proper cooking.

Directions: Underline any mistakes you think Jane is making. Fill in the chart on the next page.

Jane is in charge of planning and preparing the family meals for one week, as her mother is ill this week. She has watched her mother prepare dinner and has gone shopping with her several times, so she's confident that she knows enough about nutrition and meal planning. (Although she's never studied nutrition or taken a home economics class).

On Jane's visit to the supermarket these are the items she selected for her dinner menu: Rump roast, potatoes, broccoli, iceburg lettuce, tomato, cucumber.

After Jane purchased her foods she dropped by a friends house for a couple of hours visit, leaving her groceries in the car. When she got home she began her dinner preparation. First she began cooking her 5 pound roast about 3 hours before serving time at 400°. Her family likes their meat well done. She wanted to have things done ahead of time so she peeled her potatoes with a paring knife. She knew that if they were exposed to air they would turn dark, so she let them soak in water until cooking time. When it was time to prepare the broccoli and potatoes she put them in plenty of water (she didn't want them to burn) and began to boil them. She figured these would take about an hour and a half. She had seen her mother put soda in her green vegetables (her mom says this keeps them nice and green) so she put a teaspoon of soda in her broccoli. Jane wasn't too sure of making gravy so she bought the packaged kind and all she did was mix it with 1 cup of tap water.

She began preparing her salad by soaking her iceburg lettuce to remove bugs, peeling her tomatoes and cucumber. She then cut her lettuce and tossed her ingredients. She put her dressing on hersalad and refrigerated her salad. Jane was so proud of her efforts.

Interlinear Device (continued)

Mistakes	Why not good procedure to use?	Correct food principle

Key (for teacher's information)

1. Leaving groceries in car
2. Cooking temperature for roast
3. Potato preparation - peeling, soaking, use of cooking water for gravy
4. Broccoli - time, amount of water, soda
5. Salad - soaking, tearing (instead of cutting), use of dark leafy greens, adding dressing in advance

Begin study of food principles.

Nutrients - Programmed Learning

Level: 9th Grade Foods

This device is designed to be used as an introduction and review covering the 6 basic nutrients, their functions and foods which are good sources of each nutrient. If the students did not pass the pre-test with 85% accuracy, they would be required to take the programmed learning for a refresher. After a post-test at the end, if they indicated a need for enrichment, learning packages would be made available on the specific nutrient in which they showed the weakness.

Note: (A programmed learning device can be programmed on a computer)

PERFORMANCE OBJECTIVE	CONCEPTUAL STATEMENT	LEARNING EXPERIENCE
After completing this programmed learning exercise, 9th grade students will be able to list 6 main nutrients, one major function of each and two foods which are rich in each nutrient.	Food consists of building blocks or nutrients which can furnish energy to the body, can build & repair body tissue & can regulate and protect body processes.[5]	Pre-test over nutrients. Programmed learning device.

You will be given an answer sheet to record your answers to the questions as they appear in the following pages. This will not be graded--it is designed to give you a brief review of the principles of nutrition learned in 7th grade foods.

You may proceed at your own rate. The answers appear on the right hand side of each page. You should cover them with another slip of paper. The questions are designed to be answered in sequence so don't skip around. After you have answered question #1, move the slip of paper at the right down to be sure that you have answered the question correctly. Where an (*) appears on the answer blank, that means that you can use your own words to answer the question. The answer does not have to be exact.

* *

1. Food choice can help to gain weight, lose weight, or maintain the same weight. The type and amount of food eaten has an effect on appearance and ________. WEIGHT

2. A calorie is a measure of heat or energy--a calorie is not a food. It is a measure of energy in food just as inches measure distance, cups measure volume, pounds measure weight. Calorie is a measure of heat or ______. ENERGY

3. The measure of energy in food is called a _________. CALORIE

4. The recommended number of calories a teenage girl should eat daily is 2400. The number of calories needed each day is determined by the basal metabolism rate and by the level of activity. To lose

weight, the number of calories consumed should be less than 2400. Karen should eat (more/fewer)__________ calories if she is trying to lose weight. FEWER

5. Calories is a measure of heat or _________. ENERGY

6. Nutrition is the study of food eaten and how the body uses it. Food is eaten to live and grow, to keep healthy and to get energy for work and play. Food helps us grow, stay healthy and gives us _____. ENERGY

7. Food is made up of different nutrients needed for growth, health and energy. Food helps keep your body healthy, gives energy and makes your body _____. GROW

8. Food serves many fuctions. It contributes to satisfying many needs. Of course, there is one need that food alone can satisfy--the basic physical need of nourishment. Food satisfies the body's need for ______________ NOURISHMENT

9. Circle the purposes of food:
   - a. growth
   - b. energy
   - c. satisfy likes
   - d. maintain good health
   - e. celebrate special events

   A, B, D

10. There are many people who spend a great deal of money for foods that are not nourishing. There are others who eat constantly--but the wrong things. We should choose foods that are ______. NOURISHING

11. Many kinds of combinations of food can lead to a well-balanced diet. No food by itself, however, has all the nutrients needed for full growth and health. For a well-balanced diet, you should eat (the same/different) combinations and kinds of food. DIFFERENT

12. Nutrition is the food you eat and how your body uses it. Nutrients are the building blocks of food, and the same building blocks that make up food are used to make up your body. Another word for nutrients is ________. (2 words) BUILDING BLOCKS

13. Nutrients are divided into six groups: carbohydrates, fats, protein, vitamins, minerals, and water. Most foods are made of more than one nutrient. However, no food contains all the nutrients. Foods contain (one/more than one) nutrient. MORE THAN ONE

14. Different nutrients contribute to your life and health in different ways. Most nutrients perform more than one job, although each is noted only for its most important function. Most nutrients perform (one/more than one) _______job. MORE THAN ONE

Nutrients - Programmed Learning (continued)

15.	For example: The primary function of proteins is growth and repair of body tissues because the cells of your body are constantly being built up or torn down. The purpose of proteins is to ____ and ______ body tissues.	BUILD REPAIR
16.	Another function of proteins is to help form substances in the blood called "antibodies" and which fight infection. Antibodies come from proteins and help fight __________.	INFECTION
17.	Digestion breaks protein into amino acids. Amino acids are essential for human growth. Amino acids form the building blocks from which proteins are made. The building blocks of protein are called _____.	AMINO ACIDS
18.	There are some amino acids which your body can make, and some which your body cannot make. Essential amino acids are ones which the body cannot make. The amino acids which the body cannot make are called ______ amino acids.	ESSENTIAL
19.	Circle the functions of proteins: a. build new cells & tissues b. break down old cells c. repair body tissues d. keep skin smooth e. growth of body f. to build amino acids	A, C, E
20.	Antibodies are: a. found in the blood b. made from proteins c. repair body tissues d. used to fight infection e. amino acids f. a source of energy	A, B, D
21.	Many foods provide proteins. Meat, fish, milk and eggs are rich sources of protein. Large amounts of protein are found in which foods? (4 words ___*___	MEAT, FISH EGGS, MILK
22.	Protein is found in which of the following foods? a. scrambled eggs b. milk c. citrus fruits d. chili beans d. corn on the cob e. peanut butter f. honey g. tuna	A, B, D, E, G
23.	Another nutrient is carbohydrates. The purpose of carbohydrates is to supply the body with energy. One source of energy for our body comes from ______.	CARBOHYDRATES
24.	Quick energy foods contain large amounts of _____.	SUGAR
25.	Starches are another form of carbohydrates. The starches in all kinds of breads, cereals and cakes are carbohydrates. There are also starches in such vegetables as potatoes, corn, lima beans, etc. Breads and cereals are a type of carbohydrate known as _____.	STARCH

26	Two forms of carbohydrates are _____ and ____.	SUGAR, STARCH
27.	Before starches can be used by the body, they must first be changed to sugar. This takes time and the energy from the starches is only gradually released to the body. Which type of carbohydrate provides quick energy to the body? _______	SUGAR
28.	Fats are another good source of energy. Ounce for ounce, fats contain more than twice as much energy as carbohydrates and proteins. Energy comes from foods rich in carbohydrates, proteins and _______.	FATS
29.	The amount of energy from fats cannot be used as quickly as the energy from carbohydrates. Fats provide a longer lasting kind of energy which the body can store for future needs. Energy from fats is used more (slowly/quickly)____ than energy from carbohydrates and it can be _____ for future needs.	SLOWLY STORED
30.	Which type of food must be first converted to a sugar before it can be used by the body?_____	STARCHES
31.	Fats are found in both plant and animal foods. Plant foods, or oils, are liquid at room temperature. Animal fats are solid at room temperature. Fats are found in ___ and ____ foods.	PLANT ANIMAL
32.	An example of plant fats would be: a. corn oil c. bacon fat b. vegetable shortening d. peanut oil	A, D
33.	Foods which consist of animal fat are: a. lard c. shortening b. corn oil d. butter	A, C, D
34.	Vitamins are a nutrient essential for growth and normal functioning of the body. Vitamins are required in very small amounts. The amount of vitamins necessary for body growth is a ___ (large/small) amount.	SMALL
35.	Fruits are the best source of Vitamin C (ascorbic acid) and are also a good source of Vitamin A. Fruits contain both Vitamin _____ and Vitamin _____.	A and C
36.	Your body needs Vitamin C to form a cementing material called collagen which holds the cells together and forms strong blood vessel walls. Vitamin C forms _____ which holds the cells together and forms strong blood vessel walls.	COLLAGEN

Nutrients - Programmed Learning (continued)

37.	Your body cannot store or manufacture Vitamin C. Therefore, you need to eat at least one food which is high in Vitamin C each day. The body cannot manufacture or store __________.	VITAMIN C
38.	Circle the items which destroy Vitamin C. a. air b. steam c. heat d. water e. oil f. sugar	A, C, D
39.	Food rich in Vitamin C are : (circle the letter) a. eggs b. citrus c. tomatos d. carrots e. meat f. milk	B, C
40.	Another water-soluble vitamin is B_2 or Riboflavin. Milk provides Riboflavin which helps keep the skin soft and smooth and helps with vision of the eye. Riboflavin is found in _______products.	MILK
41.	Riboflavin is easily destroyed by light. Milk cartons are used instead of clear glass to protect milk from the loss of Vitamin B_2 by __*__	PROTECTING IT FROM THE LIGHT
42.	Water soluble vitamins are not stored by the body. They must be taken into the body each day. Two water soluble vitamins are Vitamin ____ and _____.	C and B_2
43.	Another type of vitamin is called fat soluble. Vitamins A, D, E and K are fat soluble. Vitamin A helps your eyes adjust quickly from light to dark. It prevents "night blindness". Vitamin A is necessary for good __*__ .	VISION OR EYESIGHT
44.	Carrots are high in a pigment called carotene which is converted by the body to Vitamin A. Carotene comes from the deep yellow vegetables such as __*__.	CARROTS, YAMS, ETC.
45.	Vitamin A also comes from cream, butter, cheese, and whole milk as well as from dark green and deep yellow vegetables. The functions Vitamin A performs in the body are _____, ______ and ______.	GROWTH EYESIGHT GOOD SKIN
46.	Another fat soluble vitamin in milk is Vitamin D. The purpose of Vitamin D is to help the body use calcium and phosphorus for strong bones and teeth. Vitamin D helps to build strong _____ and teeth.	BONES
47.	Foods rich in Vitamin D are milk, butter, and egg yolks. Vitamin D is usually added to milk and called fortified milk. Most milk is fortified with _______ and is a reliable source of this vitamin.	VITAMIN D

Nutrients - Programmed Learning (continued)

48.	Another name for Vitamin D is the ______ because its reaction with the sun and your skin.	SUNSHINE VITAMIN
49.	Some fats carry with them the fat soluble vitamins. These vitamins are stable and not usually lost during cooking. The fats in milk, eggs, butter and margarine are important sources of Vitamins A and D. Other fats contribute Vitamin E, found in green, leafy vegetables and fruits, and Vitamin K, found in cauliflower, cabbage, and pork liver. The fat soluble vitamins are ____, ____, ____ and ____.	A, D, E, K
50.	Minerals are another important nutrient in the body. Minerals do not burn and do not give calories, but they are needed to repair and build cells and to maintain life processes. Minerals do not add _____ to your diet.	CALORIES
51.	The important minerals for you to know are calcium, phosphorus and iron. Calcium is know best for its function of building strong bones and teeth. It also assists with blood clotting and gives strength and firmness to body cells, Calcium builds strong ____.	BONES AND TEETH
52.	Milk is a good source of calcium. Other milk products are also good sources of calcium such as ice cream, cheese, etc. A good source of calcium is _____.	MILK
53.	Another mineral found in milk is phosphorus. Phosphorus is needed in the body cells to release energy to the body and it also combines with calcium to make strong bones and teeth. Phosphorus reacts with ____ to build strong bones and teeth.	CALCIUM
54.	Iron is necessary in the body for production and maintenance of red blood cells. The red blood cells transport oxygen from the lungs to all body cells and remove waste. It is iron which gives the blood its red color. Iron is needed to produce and maintain _________.	RED BLOOD CELLS
55.	The purpose of iron in the blood is to ___*___ .	BUILD RED BLOOD CELLS, TRANSPORT OXYGEN.
56.	Iodine is another important nutrient found in seafoods and iodized salt. Iodine affects the activity of the thyroid gland and prevents goiters. A nutrient found in seafoods and iodized salt is _______.	IODINE

Nutrients - Programmed Learning (continued)

57. Although water and roughage are not nutrients, they also play vital roles in maintaining body functions. Roughage has no nutritive value but it does aid in digestion and in the elimination of wastes. An aid to digestion and elimination is____.

WATER

58. The average adult requires the equivalent of 6-8 glasses of water daily. You might live without food for weeks, but you could survive only a few days without water. ____ is just as essential as food for your body to function normally for water makes up 60% of the body weight.

WATER

59. Water is necessary to remove body wastes and to keep body temperature constant. Water is necessary for digestion, temperature control and the removal of _______.

BODY WASTES

60. IN SUMMARY: Foods contain varying amounts of nutrients and most foods are made of more than one nutrient. Nutrients are the building blocks of food and can be classified into six general groups: carbohydrates, fats, protein, vitamins, minerals and water.

The nutrients from food serve your body in 3 general ways. Carbohydrates and fats supply the energy for your work and play; proteins build and repair your body and provide energy, and vitamins, minerals and water regulate and protect your body processes.

List the 6 general categories of nutrients. _____, ____, ______, _____, ______ and _____.

FATS, CARBOHYDRATES PROTEINS, VITAMINS, MINERALS, WATER

This would be followed by laboratory experiments to determine how you can tell which nutrients are in a food. (Dairy Council of Arizona - "Investigating Foods") Labs involving principles of cooking to protect the nutrients in foods.

Vitamin C - Film Loop

Level: 7th and 8th Grade

Following or during a study of a unit on Vitamin C - included with a learning package or programmed nutrition book after including instructions to view the film loop .

PERFORMANCE OBJECTIVE	CONCEPTUAL STATEMENT	LEARNING EXPERIENCE
The student after viewing the film loop "A Great Destroyer of Vitamin C" will be able to list the word, air, as one of the destroyers of Vitamin C on a quiz question and use the proper methods of handling Vitamin C foods.	Vitamin C is easily destroyed by air.[6]	Film loop "A Great Destroyer of Vitamin C." *EVALUATION

*Solving a problem of handling Vitamin C foods by writing an answer.

Film loop - Running time 3 minutes 50 seconds

I. Title "A Great Destroyer of Vitamin C"
Title appears in Hook & Loop letters set on Hook and Loop board.

Scene II. This scene is shot out-doors on a sunny day.
Camera placement (hand held or tripod about ten feet from a large orange tree bearing fruit).

Scene III. The camera zooms slowly in focusing on a large growing orange. Suddenly a hand appears and picks the orange.

Scene IV. The camera zooms backward to show a young student wiping the dust off the orange as she carries it into a house. The camera follows the student's back as she walks away from the tree and into the house showing the doorway, etc.

Scene V The camera slowly crosses in a kitchen to show a sink, cutting board and a nearby table with a small electric fan that is blowing. Ribbons tied on it are blowing straight out from the fan and the fan is directed to the cutting board area (a quick camera pan back to the cutting board from the fan will show this)

Scene VI Camera shows the hands of the student rinsing off the dust under a faucet.

Scene VII The students places the orange on a cutting board. The camera shows the forearm reaching for a knife (at least utility size) and starting to cut the orange in halves. She then places the 2 orange halves so the cut halves face upward.

Scene VIII. The camera shows a telephone with a clock nearby showing 2 PM.

Vitamin C - Film Loop (continued)

Scene IX. The student, 3/4 back and side view, is shown and she is pulling up a chair and is very animated and gesturing while talking on the phone.

Scene X The camera shows the orange halves on the cutting board, then goes to the electric fan blowing and back to the orange halves.

Scene XI. Camera focuses on the girl still talking on the phone and the clock showing 3 PM.

Scene XII. The words of Hook and Loop letters " A great Destroyer of Vitamin C - Air."

Scene XIII. The word "Stop" of Hook and Loop letters on a Hook and Loop board.

This film loop could lead into further study of the proper methods of handling Vitamin C foods and the study of how Vitamin C is used by the body.

Further units of the other vitamins, their handling and body uses could lead from this film loop technique. Any technique such as this could culminate with a laboratory experience and an evaluation device.

Props Needed

1 Hook and Loop Board
1 Set of Hook and Loop Letters
1 Orange tree with ripe oranges
A nearby house
Sink
Cutting Board
Knife - utility size
Electric fan with ribbons attached
Table for the fan
Telephone
Clock with large numerals
A chair
A teenage girl

Photo Equipment Needed

1 Super 8 Camera - film
3 Floodlights
1 Stop watch --to use for run through at least twice for the rehersals in order to time the sequences to obtain a film loop of 3 minutes and 50 seconds.

Dark Leafy Greens - Living Charts

Level: Adult

This is designed for a group of young families who have indicated willingness to participate in a pilot study in nutrition education. Prior to use of this technique, each family has taken a pre-test to indicate current nutrition knowledge and has recorded a three-day dietary intake. A sound-on-slide presentation about vitamins A and C, calcium, iron and calories will be available for use by the families at their convenience in a central locality. Families will be requested to view the presentation at least once prior to the first class at which this technique will be used.

PERFORMANCE OBJECTIVE	CONCEPTUAL STATEMENT	LEARNING EXPERIENCE
Young familes will recognize the vitamin A & C, iron & calcium value and low calorie content of dark, leafy greens as a way to increase family health by consciously substituting them in family meals for less nutritious, higher calorie vegetables.	Dark, leafy greens are an important, low-calorie source of vitamins A and C, iron and calcium. The darker green, the more nutritive value they have.[7]	Living Charts Discussion Have a testing party using several green, leafy vegetables. Serve each raw, cooked, and processed to increase flavor varibles. *EVALUATION

*A post-test and three-day dietary intake will show increased consumption of dark, leafy greens by 10% over those used prior to the project.

Young families in the class will divide into groups, each group representing a fruit or vegetable named by the teacher. Groups or individuals (depending on group size) research vitamins A & C, iron, calcium and calorie content of the individual food using Composition of Foods, Agriculture Handbood No. 8. Each person representing designated nutrients or calories cuts a piece of yarn to show "his" value in that food using one inch to represent one milligram, International Unit or calorie in that food. Groups stand with strings to make living charts for each food then mount yarn for future discussions. The comparative distances each stands from a central spot will give a graphic idea of the comparative nutritive values of each food. (Like Food Comparison Cards from the National Dairy Council)

When the yarn is mounted, the group will be led into a discussion which will emphasize which foods provide the most nutrients and fewest calories for an equal amount of food. Other considerations to include in the discussion are: Does conscious awareness or habit determine food choices? Are foods disliked or not chosen because of influence by others or previously eating poorly prepared foods? Have the foods declared to be disliked ever been tasted?

Information from this discussion and observation of nutrient values of

Dark Leafy Greens - Living Chart (continued)

foods posted will then be used by each family unit to increase the nutrient content and decrease calorie content, if needed, of the previously tabulated three-day dietary intake.

The "tasting party" following the discussion will provide opportunity for class members to taste the foods, each prepared in a variety of ways, with the purpose of counteracting dislikes presented during discussion about eating poorly prepared food items or not having tasted the food. After trying the foods, it would be hoped that similar foods would be introduced into family meals.

Following this technique, the families will discuss and calculate the fewest changes needed to increase intake and/or meet RDA's of the above nutrients through substitution of food, not pills, in the previously calculated three-day dietaries. Further classess will include discussions of other sources of vitamins A and C, iron and calcium and energy needs for young families of their ages and activities.

Final Project Evaluation will indicate changed behavior in choices made for family meals through an increased use of dark, leafy greens as indicated on the final three-day intake.

FOOD FOR LIFE

Energy - Set Induction

Level: 7th and 8th Grade

Follow a unit on carbohydrates or filmstrip "Breakfast and the Bright Life."

PERFORMANCE OBJECTIVE	CONCEPTUAL STATEMENT	LEARNING EXPERIENCE
The student will reply to the questions about the matches and lead up to the relationship of the matches to people and the fact that both use heat (a method of releasing energy.)	The body burns food so as to convert it into energy for all its functions.[8]	Set induction 2 matches ***EVALUATION**

*Energy is needed to function.

Props needed: 1 unburned matchstick, and 1 burned matchstick.

Hold them up in front of the class and ask the following questions:

1. What have I here?

2. What kind of people do you think these matches represent?

3. How much get up and go does each match or person have? Discuss the reason for their deductions.

4. Can you burn the burned match? Why?

5. If you burn the unburned match, what happens? (Gets hot)

6. If it gets hot, what happens?

7. The match burned. What else burns after it has been burned in the body? (Food)

8. What is it called? (Energy)

This set induction could be used to lead into a unit about how the body obtains and uses food for energy and needs to keep replacing the energy.

Microorganisms In Food - Programmed Learning

Level: Senior High School

Food sanitation and packaging precedes this unit on microorganisms.

PERFORMANCE OBJECTIVES	CONCEPTUAL STATEMENT	LEARNING EXPERIENCE
The student will identify three types of microorganisms of concern to man's food supply.	Microorganisms can help or hinder man's food resources.[9]	Students will do a programmed learning unit on microorganisms.
The students will be able to recall three bacteria that are the major causes of food poisoning in America.	Carelessness, lack of knowledge, or improper sanitation can lead to serious illness from bacteria in food.[9]	The students will observe bread mold microscopically.
The students will know the basic reaction chemically in yeast fermentation.		The students will observe the fermentation process by making fruit compote.
The students will be able to list the foods that can carry the following bacteria: Staphylococcus, Clostridium, Botulinum, Salmonella.		The students will prepare yeast dough to observe the leavening function of yeast.
The students will be able to recognize correct procedures in insuring germ-free food.		*EVALUATION

*The students will be given a test over the programmed learning packet.

The students will be evaluated on their performance in lab over the lab learning experiences: The fermentation process, mold observations, and yeast dough preparation.

The students will go to the supermarket, and rate the condition of the canned foods that have been reduced for quick sale because of damage to the package.

Note to Teacher: When typing for your own use put the answers on the back of each question.

MOLDS

1. Molds grow in filaments forming a tough mass which is visible as "mold growth." Molds form spores, or seeds, which, when dry, float through the air.

2. Molds form ________ or ______which, when dry, float through the air. These seeds, or spores, land on food products and start the growth cycle again.

(seeds or spores)

3. These ________or________, land on _____ ________, and start the growth cycle again. Many molds growing on grains and nuts can produce illness in animals and man.

(seeds or spores; food products)

4. Molds growing on _______ and _____ can produce illness in animals and man. There are also molds that benefit man's food supply.

(grains and nuts)

5. There are also molds that (hinder/benefit) ________man's food supply. Addition of mold cultures to cheese results in a particular variety.

(benefits)

6. Camembert and Roquefort are two varieties of cheese made by adding mold cultures. __________ and _________ are two varieties of cheese made by adding mold cultures to cheese.

(Camembert and Roquefort)

7. Molds form __________ or _________which, when dry, float through the air. Molds can cause illness in animals and man, as in the molds growing on ___________ and ______. They can also be helpful in cheese formation by the addition of mold cultures. Two varieties of cheese formed by mold cultures would be ____________ and ____________.

(seeds, or spores)
(grains & nuts; Camembert & Roquefort)

YEASTS

8. Yeasts grow by the formation of a small cell on the side of the yeast cell and produce fermentation. Yeasts grow by the ___________ on the side of the yeast cell.

(formation of a small cell)

9. Yeasts produce ____________ by the formation of alcohol and carbon dioxide gas from sugar. Yeast produce fermentation by the __________ ____________ from sugar.

(fermentation)
(formation of alcohol & carbon dioxide gas)

Microorganisms In Food - Programmed Learning (continued)

10. Yeast is important to flavor development of food. Yeast can be used as the leavening action in bread dough.

11. Yeast is important for ________ development, and as the ___ _____ in bread dough.

(flavor; leavening action)

12. Yeast fermentation is the process for converting grapes to wine. Yeast produce fermentation by the formation of _________ and __________ _______ ____ from sugar.

(alcohol & carbon dioxide gas)

13. Temperature increases will destroy yeasts. Yeasts are destroyed by _____________ _________.

(temperature increases)

14. Bacteria are rod shaped, round or spiral in form. Bacteria grow and increase in number by the splitting of a single cell.

15. Bacteria are shaped like _______, ______ or ________, and increase in number by the __________________.

(rod, round or spiral; splitting of a single cell.)

16. Bacteria grow under a wide variety of conditions. The bacteria Salmonella is capable of causing infection in man.

17. The bacteria __________ is capable of causing infection in man.

(Salmonella)

18. Meat, poultry, fish, eggs, and dairy products that are eaten raw or that have inadequately heated can harbor Salmonella bacteria.

19. To ingest Salmonella, we must eat foods ______ or that have been inadequately heated. Salmonella can cause intestinal irritation. Safe food and proper sanitation can prevent Salmonella.

(raw)

20. ______ _______ and ______ _______ can prevent Salmonella.

(safe food and proper handling)

21. Staphylococci bacteria are found in the air and can occur in infected cuts and abrasions of the skin, boils and pimples. They may be present in the nose and throat of food handlers.

22. A food handler that has a cut on his hand may be carrying the bacteria _________________.

(staphylococci)

23. Rapid growth of Staphylococci can occur in contaminated food if it is held at temperatures ranging between 50° and 140° for 3-4 hours.

24. Rapid growth of Staphylococci can occur in contaminated food if it is held at termperatures ranging between _____ and _______ for ______ to ______ hours.

(50° and 140°; 3-4 hours.)

25. Foods that provide the ideal media for staphylococcus growth are custards, cream fillings, poultry salads, potato salads, mayonnaise, ice cream, poultry dressing and fish. Mrs. Ford had turkey and dressing for Thanksgiving. It set out on the dining room table for 2 hours while they ate. Later on, Mr. Ford complained of stomach pains and nausea. It was probabley due to the ____________ bacteria found in the _________ or ______________________.

(Staphylococcus; turkey or poultry dressing)

26. The best safeguard against staphylococcus poisoning is prompt refrigeration and pasteurization of food, and segregation of infected people from working with food.

27. Prompt refrigeration, pasteurization, and segregation of infected people can prevent ________ ___________.

(staphylococcus poisoning)

28. Two bacteria that can cause disease in man are staphylococcus and salmonella. They can be obtained by improper treatment and processing of food. Clostridium botulinum is a bacteria that can cause a rare food poisoning called botulism.

29. __________ ___________ is a bacteria that can cause a rare food poisoning called botulism. Botulism is 65% fatal.

(Clostridium botulinum)

30. Botulism is _________ fatal. a. 45% b. 60% c. 65% Death from botulism is usually a result of respiratory paralysis and cardiac failure.

(c. 65%)

31. Death from __________ is usually a result of respiratory paralysis and cardiac failure. Botulism spores are produced without oxygen, and are quite heat resistant.

(Botulism)

32. Botulism spores are produced ________ ________ and are quite _______ ___________. Canned foods that aren't properly processed are good sources of botulism. Cans that have been damaged, or that are bulging may carry botulism bacteria.

(without oxygen; heat resistant)

33. ________ _________ are good sources of botulism. Botulism bacteria may be found in __________ or ________ cans.

(Canned foods; damaged or bulging)

Microorganisms In Food - Programmed Learning (continued)

34. Botulism toxin can be inactivated by heating to 80° C for 10 minutes. One way to prevent botulism food poisoning is to heat canned goods __________ for __________.

(80° C for 10 minutes)

---

35. Three bacteria found in foods are Salmonella, Staphylococcus, and botulism.

Bacteria	Source of Bacteria	Treatment
salmonella		
staphylococcus		
botulism		

(salmonella - meat, poultry, fish, eggs, dairy products that are consumed raw. Treatment: Safe food and proper sanitation.

staphylococcus - in infections of the skin, or custards, cream fillings, poultry salads, potato salads, mayonnaise, ice cream. Treatment: pasteurization, segregation of infected people from food area, and refrigeration.

Botulism - damaged or bulging canned food products. Treatment: heat food to 80° C for 10 minutes.)

A follow up on the Microorganisms unit could be a unit on home canning, or on selecting food for man-made or natural disasters, where the student would need to recognize aspects of food keeping qualities and optimum choices in food longevity. and the diseases that may be prevented with the proper choices made.

FOOD FOR PEOPLE

The Researchers - Videotape Survey

Level: Seventh Grade

Preceding Activities: Prior to this lesson, the class will have studied the Basic Four food groups in the textbook (Teen Horizons, pp. 242-259), seen a filmstrip (Mix and Match), done a class exercise on catagorizing foods into food groups related to the cafeteria type A lunch and discussed cultural eating habits and their affect on sound nutritional practices based on the Basic Four.

PERFORMANCE OBJECTIVES	CONCEPTUAL STATEMENTS	LEARNING EXPERIENCE
The student will be able to write a list of at least five teenage eating habits, observed in the cafeteria or viewed the videotape, what would be considered "poor" when compared to the Basic Food groups (Basic 4).	Teenagers assume responsibility for their own nutrition when they choose food in the school cafeteria.[10] Teenagers, especially girls, have the poorest eating habits of any age group.[10] One method of evaluating eating habits is to use the Basic Four food group requirements to analyze recorded or observable food habits.	Use cafeteria videotape activity entitled "The Researchers". *EVALUATION

*Use ditto entitled "The Findings".

Teacher Preparations:

1. The teacher will arrange to have the tray returns for the Class A lunch in the cafeteria videotaped as they are returned. The film will include 7th, 8th and 9th grade students. If possible, the filming should be done by remote camera so student behavior would be as normal as possible. Also, if possible, the filming should be in color, so food would be more easily identifiable. The film should run between 15 to 20 minutes. Its contents should include:
    a. Shot of the complete Class A lunch tray as it is served.
    b. Student approach shots to determine the student's sex and to see if milk carton is discarded.
    c. The camera should then take a close-up of the tray to show which foods have been left on it.
    d. No specific script needs to be written since this will be survey information.
2. The teacher should prepare a copy of the lunchroom menu for the meal to be seen on the tape.
3. The teacher will prepare student observation sheets of the Basic Four food groups, so that a tally of rejected foods could be made and tallied according to boy-girl rejections and total rejections.

The Researchers (continued)

4. The teacher should prepare a ditto, entitled "The Findings", for the evaluation of the lesson.
5. This lesson could be done without the videotape equipment by using teams of students in the cafeteria.

Class Activities:

1. Students are given the lunch menu for the school lunch shown on the videotape. Discussion of the menu should cover:
    a. Under which food group do each of the items belong?
    b. Is the menu nutritionally balanced?
    c. Which foods do you think students will eat?
    d. Which foods do you think students will leave on their trays?
    e. Do you feel teenagers eat well balanced diets, when you consider what you know about the Basic Four?
2. Students are divided into four observation groups, with the instructions to observe the following actions in the videotape
    a. Milk group rejections
    b. Meat group rejections
    c. Fruit-vegetable group rejections
    d. Bread-cereal group rejections

    The observation sheets will be distributed and will be explained as to use in filling them out, using them with the videotape and forming some type of conclusions when relating them to the Basic Four food groups.
3. Students will observe the tapes and record their observations. After observing the tape, they will compile the data, with the teacher's help, and make preliminary conclusions based on this data.

These questions will need to be answered in the summary:

a. Can you apply the statement, "You can lead a horse to water but you can't make him drink", to what you saw in the tape?
b. Who makes the nutrition decisions for you in the lunchroom?
c. Do teenagers, based on this limited information, have "good" eating habits? If not, what makes them "bad"?
d. Which groups, the boys or the girls, had the poorest eating habits? Why?
e. Which grade level had the poorest eating habits? Why?

The Follow-up:

The next day the teacher will pursue the following questions:

a. How did the videotape affect you?
b. Why do students reject certain foods, both in the cafeteria and at home, etc.?
c. What could be done to change their attitudes toward certain foods in the cafeteria? At home?
d. Could "teenage foods" be served in the cafeteria and still be balanced, according to the Basic Four?
e. How can what you saw in the videotape be related to the ecology question and problem we have today?

This discussion would lead into a menu planning session using "teenage foods" and the Basic Four.

The Researchers - Videotape Survey (continued)

Observation Sheet

Researcher #1_______________________________________

Researcher #2_______________________________________

Food Group____

Menu Dish____

Number of Times left on tray	Type of eater
	Boy
	Total_________
	Girl
Total___________	Total_________
	Grand Total________

THE FINDINGS

Researcher___________________________________

List below at least 5 teenage eating habits that you observed in the film that would be considered "poor" eating habits when you compare them to the Basic Four.

Weight Control - Problem Situations

Level: High School

Introduction: This learning experience would be preceded by a unit on nutrition and health. It would be a part of a unit on weight control by nutritional planning.

PERFORMANCE OBJECTIVE	CONCEPTUAL STATEMENT	LEARNING EXPERIENCE
The student will list alternatives to a problem situation involving dieting with at least one alternative being a sensible weight loss program following nutritional principles.	A diet for weight loss should be adequate in all areas of nutrition. Decision-making ability is enhanced by exploration of alternatives in a problem situation.[11]	Problem situation given involving diets - "What Would You Do?" *EVALUATION

*Given a problem situation, the student will list 2 or more alternatives from which a person may choose to lose weight. One must be a nutritional program for sensible weight loss.

WHAT WOULD YOU DO?

DIRECTIONS: Several incidents are given below for your reaction. List as many alternatives as you can for the decision or problem. One must be a nutritional program for sensible loss. Other alternatives need not be nutritional or sensible.

1. Susan has been asked to the big school dance at the end of the month. The only dress she has is too tight although she proudly explains to you that she can get it almost zipped up. She asks you desperately, "What am I going to do?" What would you tell her?

2. John is on the basketball team during the spring but over the year he has gotten out of shape and added ten pounds. Practice is now starting and the coach tells him he has got to get rid of his excess weight. As a friend, he comes to you since he knows you are taking a home economics class. He plans to cut down and eat only dinner each day and asks your advice. What would you tell him?

3. Linda has been on a diet for the last two months and has lost about ten pounds. She is unhappy with her progress as she had hoped to lose more. She seems to always be hungry and has little will-power. After school one day her friends ask her to go along with them to the local hang-out for something to eat. Her friends all order hamburgers, french fries and shakes and encourage Linda to do the same. Disappointed and hungry for these foods, she decides to splurge just this once. The next day she is full of guilt and anxiety. She doesn't want to lose her friends and enjoys being with them, but she doesn't want to be exposed to such temptation and encouragement. What would you tell her?

Weight Control - Problem Situation (continued)

4. Sally, your best friend, has an over-weight problem. She has been applying for part time jobs lately and has been getting nowhere. She is afraid part of it might be her appearance. She really wants and needs to work to save money for everyday expenses and for some new clothes since she has outgrown most of her own. This rejection by employers has increased her nervousness and lately she has been eating even more. What could you suggest to Sally?

Possible suggestions:

1. Figure out caloric requirements for her (use reference text) for weight maintenance. Reduce calories by 500-1000 for a loss of 3 - 6 pounds in a month. Maintain balance of nutrients by using foods of lower caloric value and using smaller portions. Other alternatives might include increasing exercise, buying a new dress, letting out the dress she has.

2. Do not cut out meals--eat less more often, increase exercise, sit in sauna and steam it away, plan low calorie diet providing balance of nutrients and take into account his height, weight, amount of exercise daily. (Remember all need not be sensible)

3. Go ahead--one time won't hurt you, order something lower in calories, don't go, invite them to your house where you can give them what they want and you can have what you want, explain to them you are dieting and would rather not be tempted but thank them for asking.

4. Give up looking for a job, use design principles in choice of clothing to minimize her overweight problem, increase her amount of exercise, try letting out some of her clothes, buy some material and make somethink basic that can be changed by accessories, go to the doctor to have a check up and plan a weight reduction program with him.

Follow-up: The students will orally give the alternatives they have listed. Explore the similarities and differences among suggestions. Point out reasons some alternatives are not acceptable.

Other experiences to follow: A survey of dieting habits and attitudes of other students at the school done by having your students conduct interviews. This could be followed by a display or publishing the results and nutritional information in the school paper. Another unit on fad diets and their advocates could come next.

Weight Control - Interlinear Device

Level: High School

Introduction: This learning experience would be at the end of a unit on dieting and nutrition and used as a review.

PERFORMANCE OBJECTIVE	CONCEPTUAL STATEMENT	LEARNING EXPERIENCE
The student will identify and explain 80% of the mistakes in a given case study about dieting and nutrition.	A program of sensible weight loss should provide a nutritionally balanced diet. Many people are uninformed about nutrition. A person who has a balanced diet looks and feels better than when the diet is not balanced.[12]	Interlinear device, "Know-it-all Nora" *EVALUATION

*Evaluation by checking student's filling in columns of "mistakes" and "why not a good proceedure" for a given case study which has numbered passages.

KNOW-IT-ALL NORA

Directions: Read the following case study. Be on the lookout for mistakes.

Nora is 17 and 5'4" tall and weights 125 pounds. She is a junior in high school and several weeks ago decided herself that she was too heavy and would look fat in her summer clothes (1). She wanted to lose 20 pounds in three weeks before a big party she is giving. She says nutrition really doesn't matter as she has done a lot of reading about diets (2).

Last week she ate nothing but grapefruit and graham crackers, as many as she wanted. Someplace she read that grapefruit increased the rate of burning calories (3). She was tired a lot and cranky this week due to the fact she could't sleep much at night. This week Nora decided to try something else to lose weight. She was often hungry at school and her stomach would growl a lot. She always carried a pack of gum around for such emergencies (4). This week she decided not to have any fats since they're so terribly high in calories; she will eat starches instead to fill her up (5). She also decided not to drink anything since it would add water weight and even water has some calories (6). Someone told her to do some exercises, but she has been so tired lately that she doesn't even walk anywhere unless its absolutely necessary. She drives whenever she can (7). She believes she's getting enough vitamins and minerals on this weeks diet so does not take any supplements. "Anyhow, synthetic vitamins aren't the same as the ones in food," she says (8).

Weight Control - Interlinear Device (continued)

She hasn't lost enough weight yet so yesterday she started to skip lunch and cut down on the number of foods she will eat at breakfast and dinner (9). She can't wait to lose this weight so she can eat those things she likes and can go back to eating the way she did before. She is planning a real feast for her party (10).

What mistakes were made? Record any mistakes in the space to the right of the number below corresponding to the passage in which you found it. In the column to the right tell why it is wrong or not a good procedure.

MISTAKES	WHY NOT A GOOD PROCEDURE
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

How should she change?

Weight Control - Interlinear Device (continued)

KEY

MISTAKES	WHY NOT A GOOD PROCEDURE
1.-decided herself	-should consult physician
-said she was overweight	-according to height and weight charts she is right for her age.
2.-20 pounds in 3 weeks	-too much to lose too fast
-nutrition doesn't matter	-not familiar with good nutritional principles.
3.-diet of grapefruit and graham crackers, as much as desired	-Only 2 foods in unlimited quantity do not supply balanced nutritional diet
-grapefruit does not increase rate of burning calories	-food cannot change metabolism
4.-blamed tiredness and crankiness on lack of sleep	-these may be symptoms of poor diet
5.-no fats in diet	-fats need to be included to provide energy, fat-soluble vitamin absorption
-fats too high in calories	-fats provide twice as many calories as either carbohydrates or protein alone but almost the same as both combined.
6.-no fluids	-body needs fluids; water is essential for digestion, carries nutrients and wastes, helps to control temperature.
-water has calories	-water has no calories
7.-drives instead of walking due to lack of energy	-moderate caloric reduction and increase in exercise will be more sensible plan for weight loss.
8.-getting enough vitamins and minerals	-probably lacking in vitamins and minerals. If present, absorption probably decreased.
9.-skipped lunch	-body needs energy during the day
-fewer foods at other meals	-better to cut down portions of food and keep variety
10.-go back to eating as before	-unless eating patterns or exercise levels are changed, the weight loss will be regained and possible increased.

Follow-up: The class orally compares mistakes that were found and tell what was wrong with them. This could be followed by a unit on food fadism and quackery.

BIBLIOGRAPHY

1. Medved, Eva, The World of Food, Palo Alto, California: Ginn and Company, 1973.

2. Gifft, Helen H, Marjorie B. Washbon and Gail G. Harrison, Nutrition, Behavior, and Change, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1972.

3. Gifft, Helen H., Marjorie B. Washbon and Gail G. Harrison, Nutrition, Behavior, and Change, Englewood Cliffs, New Jersey: Prentice-Hall., 1972.

4. Revised from Scottsdale School District Home Economics Curriculum Guide, 7th grade level, Section - Food Experience.

5. Harris, Florence La Ganke and Rex Todd Withers, Your Foods Book, Boston: D. C. Heath and Company, 1964.

6. Guthrie, Helen and Helen Braddock, Programmed Nutrition, St. Louis, Missouri: C. V. Moshy Co., 1971.

7. Fleck, Henrietta, Introduction To Nutrition, 2nd ed., New York: The MacMillan Company, 1971.

8. Nutrition Source Book, National Dairy Council, Chicago, Illinois, 1972.

9. Ball Brothers Company, The Science of Food Preservation, Muncie, Indiana.

Lowenberg, M.E., E.N. Todhunter, E.D. Wilson, M.C. Feenev, J. R. Savage, Food and Man, New York: John Wiley and Sons, 1968.

Paul, Pauline, Helen H. Palmer, Food Theory and Applications, New York: The MacMillan Company, 14th edition, 1972.

Robinson, Corinne H., Normal and Therapeutic Nutrition, New York: The Macmillan Company, 14th edition, 1972.

Terrell, Margaret E., Professional Food Preparation, New York: John Wiley and Sons, 1971.

10. Lewis, Dora S., et al., Teen Horizons, New York: The MacMillan Co., 1970.

11. Bogert, Jean, George Briggs, and Doris Calloway, Nutrition And Physical Fitness, Philadelphia: W. B. Saunders Co., 1966.

Fleck, Henrietta, Introduction to Nutrition, New York: MacMillan Co., 1971.

12. Bogert, Jean, George Briggs, and Doris Calloway, Nutrition And Physical Fitness, Philadelphia: W. B. Saunders Co., 1966.

Fleck, Henrietta, Introduction To Nutrition, New York: MacMillan Co., 1971.

ADDITIONAL TEXTS AND REFERENCES

Chaney, Margaret S., and Margaret L. Ross, *Nutrition*, 8th ed., Boston, Massachusetts: Houghton Mifflin, 1971.

Cote, Pat, *People, Food and Science*, Palo Alto, California: Ginn and Co., 1973.

McWilliams, Margaret and Martha J. Davis, *Food For You*, Palo Alto, California: Ginn and Company, 1973.

Medved, Eva, *The World Of Food*, Palo Alto, California: Ginn and Company, 1973.

Pollard, L. Belle, *Experiences With Foods*, Revised Ed., Palo Alto, California: Ginn and Company, 1971.

Vail Gladys, E., Jean A. Phillips, Lucille Rust, Ruth M. Griswold, Margaret M. Justin, *Foods*, 6th ed., Boston, Massachusetts: Houghton Mifflin, 1973.

Van Zante, Helen J., *The Microwave Oven.*, Boston, Massachusetts: Houghton Mifflin, 1973.

White, Ruth Bennett, *Food and Your Future*, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1972.

REFERENCE MATERIALS

Dairy Council of Arizona, 3737 E. Indian School Rd., Phoenix, Arizona
Variety of nutrition reference materials, posters, and films available free as a courtesy of the dairymen of Arizona.

Family Circle Magazine, 488 Madison Ave., Mew York, New York 10022
Catalog of Nutrition Education Material compiled by Family Circle in cooperation with The Food Council of America, June, 1973.